Delaval, Jan



From:

Roark, Jessica

Sent:

Wednesday, October 23, 2002 11:26 AM

To: Subject: Delaval, Jan 09/728,420

Jan,

Please search, including pending, the following from 09/728,420:

SEQ ID NO:12 SEQ ID NO:7.

Please also align:

SEQ ID NO:17 and SEQ ID NO:18 SEQ ID NO:12 and SEQ ID NO:17 SEQ ID NO:12 and SEQ ID NO:13.

If you can do a pileup of all these sequences, with SEQ ID NO:12 as the reference, that would be great. If you can't do a pileup, then pairwise as indicated.

Results on paper please.

Thanks!

Jessica H. Roark

CM1 8A03 Mailbox 9E12 Art Unit 1644 703 605-1209

> Jan Delaval Reference Librarian Biotechnology & Chemical Library CM1 1E07 – 703-308-4498 jan.delaval@uspto.gov

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re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
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1 MQLKCPCFVSLGTRQPVWKK.....RPHRSYTGPKTVQLELTDHA 322
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CD8	AAW34452	19	313	10.7	180
nine B7-2	AAY41076	20	329	10.7	181
	AAB67715	22	133		192.5
Human gene 2 encod	AAB87417	22	216	13.5	227
Human B7-H3 polype	AAU00950	22	216		227
H3	AAU00949	22	244		32
ŏ	AAM41582	22	469	•	235.5
Human gene 2 encod	AAB87415	22	387	•	36
Human polypeptide,	AAM93372	22	533	•	240
Human amyloid prec	AAB27249	22	534	•	241
Human polypeptide	AAM39796	22	1020	•	41
Human amyloid prec	AAB27250	22	534		41
Human membrane or	AAB88459	22	534		41
Human B lymphocyte	AAU00906	22	534	14.3	241.5
Human B lymphocyte	AAU00905	22	441	•	41
Human polypeptide,	AAM93963	22	388	•	41
Human B lymphocyte	AAU00904	22	340	•	41
Human PRO polypept	AAU29050	22	316		247
Human PRO352 (UNO	AAB44261	21	316	•	247
Human PRO352 prote	AAY41705	20	316	•	247
Human gene 2 encoc	AAB87394	22	316	•	249
H3	AAU00946	22	316	•	249
Ω	AAB08728	21	280	29.4	496
Amino acid sequenc	AAB67718	22	490	•	558.5
	AAB08730	21	329	•	99
ψ	AAU00423	22	239	•	569
Amino acid sequenc	AAB08727	21	288	•	88
ώ	AAU00422	22	516	35.1	592.5
Amino acid sequenc	AAB67713	22	309	•	94
Human immunoglobul	008	22	370	•	98
Human immunoglobul	\rightarrow	22	345	•	98

ALIGNMENTS

RESULT 1 AAB08725 ID AAB0 CRP1; CD28 related protein-1; B7RP1; B7 related protein-1; T-lymphocyte activation; type I transmembrane protein; T cell activation; T cell proliferation; T-cell mediated disorder. Protein Key Mus sp. 02-JAN-2001 (first entry) AAB08725; AAB08725 standard; Protein; 322 Domain Domain Domain Peptide Amino acid WO200046240-A2 sequence of a murine B7RP1 polypeptide /note- "signal peptide"
47..32
/note- "mature protein"
47..279
/note- "extracellular domain" Location/Qualifiers /note= /note= "predicted transmembrane domain"
299..322 280..298 "intracellular domain" AA

27-JAN-2000; 2000WO-US01871

10-AUG-2000.

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Best Local S
Matches 322
                                   GL50; antigen; antigen presenting cell; T cell proliferation; graft-versus-host disease; autoimmune disease; allergy; viral acquired immune deficiency syndrome; AIDS; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence represents a B7RP1 (B7 related protein-1) polypeptide. The specification also describes a CRP1 (CD2B related protein-1) polypeptide. The polypeptides are involved in T-lymphocyte activation, and represent a receptor-ligand pair. CRP1 and B7RP1 are predicted to be a type I transmembrane protein. The nucleic acids are useful for regulating T cell activation or proliferation in an animal. The polypeptides are useful for treating, preventing ameliorating or diagnosing a T-cell mediated disorder in an animal. They can also be used to identify test molecules that bind to the polypeptides.
              Mus musculus.
                                                                                             Amino acid sequence of a murine GL50-1.
                                                                                                                         11-JUN-2001
                                                                                                                                                   AAB67711;
                                                                                                                                                                            AAB67711 standard; Protein;
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08-MAR-1999;
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Pred. No. 2.3e-135;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence represents a murine GL50-1 polypeptides. GL50 molecules are antigens on the surface of antigen presenting cells, which costimulate T cell proliferation and bind to costimulatory receptor ligands on T cells. GL50 modulating agents are used to modulate an immune response in a subject. GL50 polypeptides are used to modulate T cell costimulation, and to reduce the proliferation of a tumour cell. Diseases that can be treated using GL50 molecules are graft-versus-host disease, autoimmune disease, allergies, acquired immune deficiency syndrome (AIDS), and viral infections. The GL50 molecules can be used in vaccines GL50 polypucleotides can be used to locate gene regions associated with genetic disease, in tissue typing, and in forensic identification of a biological sample.
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated nucleic acid encoding a GL50 polypeptide for modulating immune response and reducing the proliferation of a tumour cell - \,
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                                                          LCCVENVALHQNITSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFIIYR 300
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                                       LCCVENVALHQNITSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFIIYR
                                                                                                    RTYTCMSKNGYPEPNLYWINTTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSRGDV
                                                                                                                 RTYTCMSKNGYPEPNLYWINTTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSRGDV 240
                                                                                                                                                             FSLYLKNVTPQDTQEFTCRVFMNTATELVKILEEVVRLRVAANFSTPVISTSDSSNPGQE 180
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                                                                                                                                                                                                                                                                                                                                                                                       The present sequence represents a murine GL50-2 polypeptides. GL50 modecules are antigens on the surface of antigen presenting cells, which costimulate T cell proliferation and bind to costimulatory receptor ligands on T cells. GL50 modulating agents are used to modulate an immune response in a subject. GL50 polypeptides are used to modulate T cell costimulation, and to reduce the proliferation of a tumour cell. Diseases that can be treated using GL50 molecules are graft-versus-host disease, autoimmune disease, allergies, acquired immune deficiency syndrome (AIDS), and viral infections. The GL50 molecules can be used in vaccines. GL50 polypucleotides can be used to locate gene regions associated with genetic disease, in tissue typing, and in forensic identification of a biological sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GL50; antigen; antigen presenting cell; T cell proliferation; tumour; graft-versus-host disease; autoimmune disease; allergy; viral infection; acquired immune deficiency syndrome; AIDS; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated nucleic acid encoding a GL50 polypeptide for modulating immune response and reducing the proliferation of a tumour cell - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAF79920
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amino acid sequence of a murine GL50-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB67712 standard; Protein; 347
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                                                                                                 121
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241 LCCVENVALHQNITSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFIIYR
                                                                                                                                                              61
                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                             Local Similarity
les 319; Conserv
                                                                                                                                                                                                                             -
                                                             RTYTCMSKNGYPEPNLYWINTTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSRGDV 240
                                                                                            FSLYLKNVTPQDTQEFTCRVFMNTATELVKILEEVVRLRVAANFSTPVISTSDSSNPGQE 180
                                                                                                             FSLYLKNVTPQDTQEFTCRVFMNTATELVKILEEVVRLRVAANFSTPVISTSDSSNPGQE 180
                                                                                                                                                              SCIDPHRRHFNLSGLYVYWQIENPEVSVTYYLPYKSPGINVDSSYKNRGHLSLDSMKQGN 120
                                                                                                                                                                              SCIDPHRRHFNLSGLYVYWQIENPEVSVTYYLPYKSPGINVDSSYKNRGHLSLDSMKQGN 120
                                                                                                                                                                                                                                                            MQLKCPCFVSLGTRQPVWKKLHVSSGFFSGLGLFLLLLSSLCAASAETEVGAMVGSNVVL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-244938/25
                              RTYTCMSKNGYPEPNLYWINTTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSHGDV
                                                                                                                                                                                                                            Dunussi-Joannopolulos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fig 2; 195pp; English.
                                                                                                                                                                                                                                                                                                                                                               347
                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
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                                                                                                                                                                                                                                                                                                            99.0%;
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                                                                                                                                                                                                                                                                                                            Score 1670;
Pred. No. 7
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                                                                                                                                                                                                                                                                                             Mismatches
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7.1e-134;
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                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        that can be treated using GL50 molecules are graft-versus-host disease, autoimmune disease, allergies, acquired immune deficiency syndrome (AIDS), and viral infections. The GL50 molecules can be used in vaccines GL50 polynucleotides can be used to locate gene regions associated with genetic disease, in tissue typing, and in forensic identification of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            which costimulate T cell proliferation and bind to costimulatory receptor ligands on T cells. GL50 modulating agents are used to modulate an immune response in a subject GL50 polypeptides are used to modulate T cell costimulation, and to reduce the proliferation of a tumour cell. Diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence represents a fusion protein, comprising murine GL50 (mGL50) and murine IgG2a (mIgG2A). The fusion protein is used in the course of the invention. The specification describes GL50 polypeptides. GL50 molecules are antigens on the surface of antigen presenting cells,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GL50; antigen; antigen presenting cell; T cell proliferation; tumour; graft-versus-host disease; autoimmune disease; allergy; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated nucleic acid encoding a GL50 polypeptide for modulating immune response and reducing the proliferation of a tumour cell - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAF79942.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amino acid sequence of mGL50-mIgG2am fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB67719 standard; Protein; 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                 biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GEMY ) GENETICS INST INC
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   70
                                                            91 YLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNTATELVK 150
                                                                                                                              11
                                                                                                                                                                                       31 LGLFLLLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHFNLSGLYVYWQIENPEVSVTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RTRPHRSYTGPKTVQLELTD 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RTRPHRSYTGPKTVQLELTD 320
YLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNTATELVK
                                                                                                                              LSTATTED-SWASMETEAGAWAGSNAATSCIDHHLHHINTSCTAARAGIENDEASALA
                                                                                                                                                                                                                                                                                        Similarity
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                                                                                                                                                                                                                                                                                                                                                                                     489 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 sample.
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                                                                                                                                                                                                                                                                                    73.1%;
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                                                                                                                                                                                                                                                      Score 1233.5; DB Pred. No. 1.6e-96; 0; Mismatches 8
                                                                                                                                                                                                                                                                                                                      DB 22;
                                                                                                                                                                                                                                                                                                                      Length
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AAF91858-AAF91929 represent cDNAs corresponding to 52 human secreted protein genes, and AAB87342-AAB87341 represent the proteins they encode. AAB87414-AAB87454 represent human secreted protein fragments. The genes and their corresponding secreted proteins are useful for preventing, treating or ameliorating medical conditions, e.g., by protein or gene therapy. Pathological conditions can be diagnosed by determining the amount of the new protein in a sample or by determining the presence of mutations in the new genes. Specific uses are described for each of the 52 genes, based on the tissues in which they are most highly expressed, and isclude developing products for the diagnosis or treatment of 'proliferative disorders, cancer, tumours, foetal and developmental
                                                                                                                                                                                                                        preventing, treating or ameticians -
Parkinson's diseases and cancers -
                                                                                                                                                                                                  Claim 11;
                                                                                                                                                                                                                                          Nucleic acid molecules encoding human secreted proteins, used in preventing, treating or ameliorating a disorder, e.g. Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                         03-SEP-1999;
03-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ParkInson's disease; cognitive disorder; schizophrenia; asthma; skin disorder; psoriasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder; anglogenic disorder; kidney disorder; gastrointestinal disorder; pregnancy-related disorder;
                                                                                                                                                                                                                                                                                                N-PSDB; AAF91911
                                                                                                                                                                                                                                                                                                                                                            Soppet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           endocrine disorder; infection; wound hea cell culture; chemotaxis; food additive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                        (HUMA-) HUMAN GENOME SCI INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              binding partner
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immune system disorder; AIDS; autoimmune disease; rheumatoid arthrininamation; allergy; neurological disorder; Alzheimer's disease;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     secreted protein; proliferative disorder; cancer;
                                                                                                                                                                                             Page 564-565; 607pp; English.
                                                                                                                                                                                                                                                                                                                                            Young PE,
Shi Y, We
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US24008
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99US-0152317.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                identification.
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                                                                                                                                                                                                                                                                                                                                            Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    developmental abnormality; haematopoietic
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Y, Flore
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on; wound healing; vulnerary;
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R, Duan DR,
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Olsen HS,
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                                                                                                                                                                                                                                                                                                                                                                      CA;
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RESULT 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                              Human; gene therapy; neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal dipulmonary disorder; cardiovascular disorder; renal disorder;
                                                                                         WO200154474-A2
                                                                                                                                                                   proliferative
                                                                                                                                                                                                                                                                                             10-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                         ABB10504 standard; Protein; 344 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          abnormalities, haematopoietic disorders, diseases of the immune system,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunosorbent assay (ELISA). The psecreted protein of the invention.
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PCT-US94-09642-2
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US-08-456-104-4
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US-08-456-104-4
PCT-US95-02576-23
US-08-479-744A-23
US-08-280-757B-23
US-08-702-525-21
PCT-US95-02576-21
US-08-702-525-13
US-08-702-525-13
US-08-147-772-2
US-08-147-772-2
US-08-153-262-2
US-08-751-624-2
US-08-751-624-2
US-08-751-767A-6
US-08-153-262-2
US-08-479-744A-29
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Query Match 10.4%; Score 175.5; DB 5; Ler Best Local Similarity 24.8%; Pred. No. 7.9e-08; Matches 75; Conservative 51; Mismatches 142; Inc.	RESULT 1 PCT-US94-09642-2 ; Sequence 2, Application PC/TUS9409642 ; GENERAL INFORMATION: APPLICANT: TITLE OF INVENTION: Purified Mammalian CTLA-4 Binding TITLE OF INVENTION: Protein and Related Reagents NUMBER OF SEQUENCES: CORRESSED ON LONGER ADDRESS: ADDRESSEE: Schering-Plough Corporation, M-3-W STREET: One Giralda Farms CITY: Madison STATE: New Jersey COUNTRY: USA ZIP: 07940-1000 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER SYSTEM: System Software 7.1 SOFTWARE: MICORSOFT WORD 5.1a CURRENT APPLICATION DATA: APPLICATION NUMBER: US 08/120,606 FILING DATE: CLASSIFICATION NUMBER: US 08/120,606 FILING DATE: 13-SEP-1993 APPLICATION NUMBER: US 08/116,882 FILING DATE: 13-SEP-1993 APPLICATION NUMBER: US 08/110,606 FILING DATE: 13-SEP-1993 APPLICATION NUMBER: US 08/110,606 FILING DATE: 13-SEP-1993 APPLICATION NUMBER: US 08/120,606 FILING DATE: 13-SEP-1993 APRICED DATE: 13-SEP-1993 APPLICATION NUMBER: US 08/120,606 FILING DATE: 13-SEP-1993 APPLICATION NUMBER: US 08/120,606 APPL	28 160 9.5 288 4 US-08-205-697A-19 29 160 9.5 288 4 US-08-702-525-19 30 160 9.5 288 4 US-09-450-798-2 31 160 9.5 288 4 US-09-450-798-2 32 160 9.5 288 5 PCT-US95-02576-19 33 151.5 9.0 589 2 US-08-724-394A-1 34 150 8.9 208 4 US-09-205-697A-17 36 144.5 8.6 306 4 US-08-205-697A-17 37 144.5 8.6 306 4 US-08-702-525-17 38 143.5 8.5 306 2 US-08-147-772-4 41 143.5 8.5 306 2 US-08-147-772-4 42 143.5 8.5 306 2 US-08-147-78-34 43 143.5 8.5 306 3 US-08-153-262-4 44 143.5 8.5 306 3 US-08-153-262-4 45 143.5 8.5 306 4 US-09-159-159-31 44 143.5 8.5 306 4 US-09-159-159-31 44 143.5 8.5 306 4 US-09-159-159-4 45 143.5 8.5 306 4 US-09-450-798-4
Length 323; Indels 35;	ng	Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence
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                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION UMBER: 08/101,624;
FILING DATE: 26-JUL-1993;
APPLICATION NUMBER: 08/L09,393;
APPLICATION NUMBER: 19-AUG-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                        TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 329 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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APPLICANT: Nadler, Lee M.
APPLICANT: Gray, Gary S.
TITLE OF INVENTION: TUMOR CELLS MODIFIED TO EXPRESS B7-2 AND NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                     TOPOLOGY: 1: MOLECULE TYPE:
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MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
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STATE: Massachusetts
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amino acid
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(617) 227-5941
                  Conservative
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            10.4%; Score 175.5; DB 2; 24.8%; Pred. No. 8.1e-08; tive 51; Mismatches 142;
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              11;
                                                             ; MOLECULE TYPE: protein US-08-101-624-2
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US-08-101-624-2
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                            Query Match
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          Best Local Similarity
                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF STATE STREET, SUITE 510
                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Freeman, Gordon J.
APPLICANT: Nadler, Lee M.
APPLICANT: Gray, Gary S.
TITLE OF INVENTION: No. 5942607e1 CTLA4/CD28 Ligands
TITLE OF INVENTION: Uses Therefor
                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy
                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/101,624 FILING DATE: 26-JUL-1993 CLASSIFICATION: 514
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                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE:
                                                                                                 TOPOLOGY:
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IBM PC compatible
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227-5941
          10.4%;
24.8%;
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         Score 175.5; DB 2
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1687
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Listing first 45 summaries
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ALIGNMENTS

RESULT 146691

CD86 precursor -

rabbit

C;Accession: I46691 R;Isono, T; Seto, A. Immunogenetics 42, 217-220, 1995 A;Title: Cloning and sequencing of the rabbit gene encoding A;Reference number: I46689; MUID:95369849

C;Species: Oryctolagus cuniculus (domestic rabbit) C;Date: 14-Feb-1997 #sequence_revision 14-Feb-1997

#text_change

23-Jul-1999

T-cell costimulatory mole

A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNAA;Residues: 1-330 <ISO>

A; Accession: I46691

QΥ 밁 RESULT 146690 δÃ 밁 Qγ В QΥ 밁 Qy A;Cross-references: GB:D49842; NID:g755098; PIDN:BAA08642.1; PID:g755099 C;Superfamily: B7-2 antigen Query Match Best Local Matches 229 251 QNITSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFI-IYRRTR 303 202 TDNS-----LIDTALQNNTVYLNKLGLYDVISTLRLPWTS--RGDVLCCV---ENVALH 115 RGAKGLVPIYQMNSELSVLANFTQPEITLISNITRNSAINLTCSSVQGYPEPKKMFFVLK 143 NTATELVKILEEVVRLRVAANESTPVISTSDSSNPGQERTYTCMSKNGYPEP-NLYWINT N 23 VSSGFFSGLGLFLLLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHFNLSGLYVYWQIE 1 MDAGCTMGLSVTVFVMALLLSGAASLRIQAYFNKTADLPCQFTNSQSRSLSELVVFWQDQ SQHFPIVPAD-----ERLVLYELFLGREKPD-NVDPKYIGR-----TSFDQESWNLQLHNVQIKDKGVYQCFVHH NPEVSVTYYLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFM 142 TENATTEYDGVIEKSQDNVT----70; Similarity Conservative 10.9%; 23.8%; -PVPVEKPRLWIAAVALTLIVVCGIVLFLTLWKRKK 273 53; ---GLYNISISGSITFSDDIRNATIYCVLQTESTETY Score 184; Pred. No. 1 Mismatches DB 2; .9e-06; Length 330; Indels 34; Gaps 201 114 60 82 228 9;

CD80 precursor - rabbit
C.Species: Oryctolagus cuniculus (domestic rabbit)
C.Date: 14-Feb-1997 #sequence_revision 14-Feb-1997
C.Accession: I46690
R.Jisono, T.; Seto, A.
Immunogenetics 42, 217-220, 1995
A;Ritle: Cloning and sequencing of the rabbit gene
A;Reference number: I46689; MUID:95369849

encoding

T-cell costimulatory mole

#text_change

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C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 30-Jun-2001
C;Accession: JC7664
R;Magistrelli, G.; Caron, G.; Gauchat, J.F.; Jeannin, P.; Bonnefoy, J.Y.; Delneste, Biochem. Biochem. 280, 1211-1215, 2001
A:Title: Identification of an alternatively spliced variant of human CD86 mRNA.
A;Reference number: JC7604; MUID:21092744; PMID:11162656
A;Accession: JC7604
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A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Residues: 1-299 <ISO>
A:Residues: 1-299 <ISO>
A:Cross-references: GB:D49843; NID:g755096; PIDN:BAA08643.1; PID:g755097
C:Superfamily: B-lymphocyte restricted antigen B7
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A; Residues: 1-275 < MAG>
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GTNTMEREESEQTKKREKIHIPERSDEAQRVFKS
                                       GNNTKNPQETHNNEL - - KVLVPVLAVLAAAAFVS
                                                                                                                                                                               KILEEVVRLRVAANFSTPVISTSDSSNPGQERTYTCNSKNGYPEP-NLYWINTTDNSLI- 207
                                                                                                                                                                                                                                                                               YYLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNTATELV 149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SFTGNNTKNPQETHNNELK--VLVPVLAVLAAAAFVSFII-----YRRTRPHRSYTG
                                                                               YDGIMQKSQD--NVTELYDVSISLSVSFPDVTSNMTIFCILET----
                                                                                                                -DTALQNNTVYLNKLGLYDVISTLRLPW---TSRGDVLCCVENVALHQNITSISQAESFT
                                                                                                                                                          RIHQMNSELSVLANFSQPEIVPISNITENVYINLTCSSIHGYPEPKKMSVLLRTKNSTIE 175
                                                                                                                                                                                                                                         VYLG-KEKFDSVHSKYMGRTSFDSDS-----WTLRLHNLQIKDKGLYQCIIHHKKPTGMI 115
                                                                                                                                                                                                                                                                                                                        GLSNILFVMAFLLSGAAPLKIQAYFNETADLPCQFANSQNQSLSELVVFWQDQENLVLNE 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PW----SKPKQEPPIDQLPFWVIIPVSGALVLTAVVLYCLACRHVARWKRTRRNEETVG
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                                                                                                                                                                                                                                                                                                                                                                                                        44;
                                                                                                                                                                                                                                                                                                                                                                                                     Score 176.5; DB 2;
Pred. No. 5.6e-06;
4; Mismatches 136;
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RESULT 4
A48754
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A;Map position: 3q13.3-3q21
C;Superfamily: B7-2 antigen
C;Keywords: glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:L25259; NID:g416368; PIDN:AAA58389.1; PI A;NOte: It is uncertain whether Met-1 or Met-7 is the initiator R;Azuma, M; Ito, D; Yagita, H.; Okumura, K.; Phillips, J.H.; Nature 366, 76-79, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Science 262, 909-911, 1993
A; Title: Cloning of B7-2: a CTLA-4 counter-receptor A; Reference number: A48754; MUID:94053735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 7-329 <AZU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 366, 76-79, 1993
A;Title: B70 antigen is a second ligand for A;Reference number: S39055; MUID:94050123
A;Accession: S39055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Homo sapiens (man)
C;Date: 10-Sep-1999 #sequence_revision
C;Accession: A48754; S39055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Gene: GDB:CD86; CD28LG2
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A; Residues: 1-329 <FRE>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Freeman, G.J.; Gribben, J.G.; Boussiotis, V.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N; Alternate names: B70 glycoprotein; CD86 antigen;
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                                                                                   --ELEDPQPPPDH-----IPWITAVLPTVIICVMVFCLILWKWKKKKRPRNSYKCGTNTM
                                                                                                                             GNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFIIY-----RRTRPHRSY-TGPKTV 314
                                                                                                                                                                            YDGIMQKSQD--NVTELYDVSISLSVSFPDVTSNMTIFCILET----DKTRLLSSPFSI-
                                                                                                                                                                                                                   -DTALQNNTVYLNKLGLYDVISTLRLPW----TSRGDVLCCVENVALHQNITSISQAESFT 263
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75; Conservative
                                         317
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 175.5;
Pred. No. 8.
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C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 23-Jul-1999
C;Accession: I49522

gene B7-2 protein - mouse

R;Freeman,

Freeman, G.J.; Borriello, F.; Exp. Med. 178, 2185-2192, 19

Murine

B7-2, an

alternative

CTLA4 counter-receptor that costimulates

1993

Hodes, R.J.;

Reiser,

H.; Gribben,

J.G.; Ng, J.W.;

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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

OM protein - protein search, using sw model

Run on: October 23, 2002, 13:23:41 ; Search time 9.50164 Seconds (without alignments) 1312.163 Million cell updates/sec

Title:
Perfect score:
Sequence:

US-09-728-420C-7
1687
1 MQLKCPCFVSLGTRQPVWKK.....RPHRSYTGPKTVQLELTDHA 322

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 105224 seqs, 38719550 residues

number of hits satisfying chosen parameters:

105224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	21	Result No.
175.5 177 175.5 160 151.5 151.5 128.5 128.5 128.5 129.5 119.	1687	Score
1100 000000000000000000000000000000000		Query Match I
3309 3299 3299 3299 5284 5286 5296 5296 3007 537 537 11348 5466 555 11098 521 521 521 521 521 521 521 521 521 521	322	Length DB
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LU_HUMAN	C166_BRARE	MOG_BOVIN	HEMA_VACCI	CAML_HUMAN	CD4_RABIT	SN_HUMAN	MUCM_ICTPU	HEMA_RACVI	ERG7_YEAST	TACT_HUMAN	EPC_MOUSE
	Q90460									P40200	P06336
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ALIGNMENTS

RP RA	RR RI	R R R	RA RA	R R	RP R	R R	R R R	RA S	R R	R P	RN	목	RT	RX	5 F S	Z Z	RT	RA	RA RA	RA	RX A	RC	RP R	ox OX	28	SO	GN DE	DE] P	D A	S I I	RESULT
SEQUENCE FROM N.A. (ISOFORMS 1 AND 2). Ling V., Dunussi-Joannopolulos K.;	J. Immunol. 166:7300-7308(2001). [5]	"Differential expression of inducible costimulator-ligand splice variants: lymphoid regulation of mouse g150-b and human g150 molecules ".	W	eripheral blood lymphocytes; 21286479; PubMed=11390480;	. (ISO	J. Immunol. 164:1653-1657(2000).	"Identification of 15.0", a novel B7-like protein that functionally binds to TOOS receptor.":	Hunter S.E., Zollner R., Thomas J.L., Miyashiro J.S.	20126021; PubMed=10657606; the Defendent of Page V M Spanishing V Forest			23-/32/1000)	"B7h, a novel costimulatory homolog of B7.1 and B7.2, is induced by	817; PubMed=10549624;	UENCE FROM	NATURE 402:82/-832(1999).	1 co-stimulation through	C.L., Van G., Mak T.W., Senaldi G.;	Brankow D., Campbell P., Chang D., Chiu L., Dai T., Duncan G., Elliott G.S., Hui A., McCabe S.M., Scully S., Shahinian A.,	Shih G., Zhang M., Coccia M.A., Kohno T., Tafuri	hare S.D. Sarmiento II. Guo J.	ymphocytes;	[1] SEQUENCE FROM N.A. (ISOFORM 1), AND CHARACTERIZATION.	I_TaxID=10090;	T (0)	(Mouse).	protein-1] H2 OR B7RP1	ICOS ligand precursor (B7 homolog 2) (B7-H2) (B7-like protein G150)	(Rel. 40, Last sequence update)	40, Created)	L_MOUSE COTUTO COTUTO COTUTO	OLT 1

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CARBOHYD
CARBOHYD
                                                                                                      DOMAIN
DISULFID
DISULFID
CARBOHYD
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DOMAIN
                                                                                                                                                                                                                                                                                                     Pfam; PF0047; 19; 1.
SMART; SM00409; IG; 1.
SMART; SM00410; IG_like; 1.
SMART; SM00410; IG_like; 1.
R-cell activation; Immune response; Glycoprotein;
R-cell activation; Immune response; Mul
                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SUGCELLOUAR LOCATION: Type I membrane protein.
-!- ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND 2/B;
-REPRODUCED BY ALTERNATIVE SPLICING.
-!- TISSUE SPECIFICITY: ISOFORM 1 HIGHEST EXPRESSION IN LYMPHOID
TISSUES, SUCH AS SPLEEN (MOSTLY IN THE MARGINAL ZONE), LYMPH NODES
(PARTICULARLY IN THE CORTEX AND IN BOTH PRIMARY AND SECONDAR'S
POLLICLES), THYMUS (PREDOMINANTLY IN THE MEDULLA) AND PEYER'S
PARCHES (MOSTLY IN THE FOLLICLES), LOWER LEVELS IN MANY
NONLYMPHOID TISSUES, SUCH AS BRAIN, HEART, KIDNEY, LIVER, LUNG,
SKELETAL MUSCLE AND TESTIS. PRESENT ON FRESHLY ISOLATED SPLENIC B-
CELLS, T-CELLS, DENDRITIC CELLS AND MACROPHAGES. THE EXPRESSION OF
ISOFORM 2 IS RESTRICTED TO HEART, SPLEEN AND KIDNEY.
-!- DEVELOPMENTAL STAGE: DETECTED EARLY IN HEMOFOLESIS: IN THE YOLK
SAC AT 11.5 AND 12.5 DPC AND, TO A LESSER EXTENT, IN THE LIVER AT
                                слявонув
                                                                                                                                                                                                                                                                                                B-cell activation; Immune resp. Immunoglobulin domain; Signal;
                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR003599; Ig.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "G150 molecules and uses therefor.";
Patent number W00121796, 29-MAR-2001.
-I- FUNCTION: LIGAND FOR THE T-CELL-SPECIFIC CELL SURFACE RECEPTOR LOSS. ACTS AS A COSTIMULATORY SIGNAL FOR T-CELL PROLIFERATION AND CYTOKINE SECRETION; INDUCES ALSO B-CELL PROLIFERATION AND DIFFERENTIATION INTO PLASMA CELLS. COULD PLAY AN IMPORTANT ROLE IN MEDIATING LOCAL TISSUE RESPONSES TO INFLAMMATORY CONDITIONS, AS WELL AS IN MODULATING THE SECONDARY IMMUNE RESPONSE BY COSTIMULATING MEMORY T CELL FUNCTION. DURING PREGNANCY, MAY FUNCTION TO SKEW THE CYTOKINE OF MATERNAL T-CELLS TOWARD IMMUNOPROTECTIVE
                                                                                           CARBOHYD
                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                            TRANSMEN
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                                                                                                                                                                                                                                                                         SIGNAL
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                                                                                                                                                                                                               DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                 C; AF216747; AAF45149.1; -...; AF199027; AAF34738.1; -...; AX100591; CAC36463.1; -...; AX100593; CAC36464.1; -...; AF394451; AAK77544.1; -...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.5 DPC.
SIMILARITY:
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                                                                                                                                                                                                                                                                                                                                                                                                                     MGI:1354701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch).
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278
299
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213
252
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                                                                                                                                                                                                                                                                                                                                                                                                                   Icosl.
    1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
1 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN
 N-LINKED
N-LINKED
HA -> TWA
                                            N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                    POTENTIAL.
                                                                                                                                                 POLY-LEU.
POLY-ALA.
                                                                                                                                                                                                           POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                     ICOS LIGAND.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                              IG-LIKE V-TYPE DOMAIN. IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                  Transmembrane;
TWAPVPYQDYLIPRYLMSPCLKTRGLP
             (GLCNAC.)
(GLCNAC.)
(GLCNAC.)
(GLCNAC.)
(GLCNAC.)
(GLCNAC.)
(GLCNAC.)
                                                                                                                                                                                                                                                                                               Multigene family;
             (POTENTIAL).
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(POTENTIAL).
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RESULT 2
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                           ICCL_HUMAN STANDARD; PRT; 302 AA.
075144; Q9NRQ1; Q9HP18;
15-JUL-1999 (Rel. 38, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
ICOS 1igand precursor (B7 homolog 2) (B7-H2)
(B7-related protein-1) (B7RP-1).
ICOSL OR B7H2 OR B7RP1 OR KIAA0653.
              MEDLINE=20126021; pubMed=10657606;
Ling V., Wu P.W., Finnerty H.F., Bean K.M.,
Leonard J.P., Hunter S.E., Zollner R., Thoma
Jacobs K.A., Collins M.;
                                                                                                                                    TISSUE-Peripheral blood lymphocytes;

MEDLINB-20465019; PubMed-11007762;

Yoshinaga S.K., Zhang M., Pistillo J., Horan T., Khare S.D.,

Sonnenberg M., Boone T., Brankow D., Dai T., Delaney J., Han

Hui A., Kohno T., Manoukian R., Whoriskey J.S., Coccia M.A.;

"Characterization of a new human B7-related protein: B7RP-1 i
                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFORM 1).
TISSUB-Dendritic cell;
TISSUB-102477846; PubMed=11023515;
Wang S., Zhu G., Chapoval A.I., Dong
TCOStimulation of T cells by B7-H2, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                    SEQUENCE FROM N.A. (ISOFORM 2).
TISSUE=Leukocyte;
                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                  Blood 96:2808-2813(2000).
 Jacobs K.A., Collins M.;
'Identification of GL50,
                                                                                                           ligand to the co-stimulatory protein Int. Immunol. 12:1439-1447(2000).
                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
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322 AA;
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                                                                                                                                                                                                                         (ISOFORM 1), AND
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35960 MW;
a novel B7-like protein
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R -> "
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1687; DB 1;
Pred. No. 3.8e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -> H (IN REF. 4 AND 5; CAC36464)
55CCBA4AD12E47E6 CRC64;
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                                                                                                                                                                                                                         CHARACTERIZATION
                                                                                                                                                                                                                                                                            H., Tamada K., Ni
a B7-like molecule
                                                                                                                          ICOS
                            Thomas
                         Spaulding has J.L., Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                            (B7-like protein G150)
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1/2

binds

6

ICOS

OS receptor."; 164:1653-1657(2000).

Immunol.

TISSUE-Brain

SEQUENCE FROM N.A.

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DOMAIN
DISULFID
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DOMAIN
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                                                                                                                                                                                                                                                  Pfam; PF00047; ig; 3.
SMART; SM00409; IG; 1.
SMART; SM00410; IG_like;
                                                                                                                                                                                                                                                                                                                         InterPro; IPR003599; Ig.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003600; Ig_like
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MIM; 605717; -
                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Prediction of the coding sequences of unidentified human the complete sequences of 100 new cDNA clones from brain woode for large proteins in vitro.";
DNA Res. 5:169-176(1998).
                                                                                            TRANSMEM
                                                                                                                  DOMAIN
                                                                                                                                                                SIGNAL
                                                                                                                                                                                      Alternative
                                                                                                                                                                                                           Immunoglobulin
                                                                                                                                                                                                                                 B-cell
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tities requires a license agreement (S send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARE PRODUCED BY ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: ISOFORM 1 IS WIDELY EXPRESSED (BRAIN, KIDNEY, LIVER, LUNG, PANCREAS, PLACENTA, SKELETAL MUSCLE, MARROW, COLON, OVARY, PROSTATE, TESTIS, LYMPH NODES, LEUKO SPLEEN, THYMUS AND TONSIL), WHILE ISOFORM 2 IS DETECTED ON LYMPH NODES, LEUKOCYTES AND SPLEEN.

INDUCTION: CONSTITUTIVE EXPRESSION IS FURTHER ENHANCED BY TREATMENT WITH TNF-ALPHA IN PERIPHERAL BLOOD B-CELLS AND MONOCYTES, WHILE IT IS DECREASED IN DENDRITIC CELLS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYTOKINE SECRETION; INDUCES ALSO B-CELL PROLIFERATION AND DIFFERENTIATION INTO PLASMA CELLS. COULD PLAY AN IMPORTANT ROLE MEDIATING LOCAL TISSUE RESPONSES TO INFLAMATORY CONDITIONS, AS WELL AS IN MODULATING THE SECONDARY IMMUNE RESPONSE BY COSTINULATING MEMORY T-CELL FUNCTION (BY SIMILARITY).

SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBFAMILY.

SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN CAUTION: Ref. 4 sequence differs from that shown in positional control of the control of 
                                                                                                                                                                                                                                                                                                                                                                                                                   AF199028; AAF34739.1;
AF289028; AAG01176.1;
AF216749; AAK16241.1;
AB014553; BAA31628.1;
AX100595; CAC36465.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onward for an unknown reason.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   molecules and uses therefor.";
t number WO0121796, 29-MAR-2001
                                                                                                                                                                                                                                 activation;
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                                                                 POTENTIAL.
CYTOPLASMIC (POTENTIAL).
IG-LIKE V-TYPE DOMAIN. IG-LIKE C2-TYPE DOMAIN POTENTIAL.
                                                                                                               ICOS LIGAND.
EXTRACELLULAR
                                                                                                                                                                                                           Transmembrane;
                                                                                                                                                                                                                               Glycoprotein;
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            This
                                     CELLS WITHIN 24 HOURS AFTER ACTIVATION.
-!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
-!- SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN.
-!- SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                             B lymphocyte activation
                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1995
01-MAR-2002
                                                                                                   Immunogenetics 42:217-220(1995).

-i- FUNCTION: RECEPTOR INVOLVED IN THE COSTIMULATORY SIGNAL ESSENTIAL
-i- FUNCTION: RECEPTOR INVOLVED IN THE COSTIMULATORY SIGNAL ESSENTIAL
FOR T LYMPHOCYTE PROLIFERATION AND INTERLEUKIN 2 PRODUCTION, BY
BINDING CD28 OR CTLA-4. MAY PLAY A CRITTCAL ROLE IN THE EARLY
BUILDING CD28 OR CTLA-4. MAY PLAY A CRITTCAL ROLE IN THE EARLY
EVENTS OF T CELL ACTIVATION AND COSTIMULATION OF NAIVE T CELLS,
SUCH AS DECIDING BETWEEN IMMUNITY AND ANERGY THAT IS MADE BY T
                                                                                                                                                                                                                                                                                                                       Oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                 P42071;
                                                                                                                                                                                     "Cloning and sequencing of costimulatory molecules.";
                                                                                                                                                                                                                            STRAIN=B/J X CHBB:HM;
MEDLINE=95369849; Pub
                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
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een the Swiss In:
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Metazoa; Chordata; Craniata;
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(Rel. 32, Last sequence up
(Rel. 41, Last annotation
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ED (GLCNAC. . .) (POTENTIAL).
ESWNLLLLLS (IN ISOFORM 2).
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Eukaryota; Metazoa; (
Mammalia; Eutheria; )
NCBI_TaxID=9986;
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entities requires a license agreement (
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InterPro; IPR003596;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RGAKGLVPIYQMNSELSVLANFTQPEITLISNITRNSAINLTCSSVQGYPEPKKMFFVLK
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                                                                       cuniculus (Rabbit)
Metazoa; Chordata;
                                                                                                                                        (Rel. 32, Created)
(Rel. 32, Last sequence update)
(Rel. 41, Last annotation update)
e activation antigen CD80 precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                          STANDARD;
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                                                         Lagomorpha; Leporidae;
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23.8%; Pi
tive 53;
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                                                         (Rabbit).
hordata; Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CYTOPLASMIC (PO'
IG-LIKE V-TYPE |
IG-LIKE C2-TYPE
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N-LINKED
N-LINKED
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POTENTIAL.
N-LINKED (
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Pred. No.
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                                                                                                                                                                                                                                          PRT;
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Pfam; PP00047; 1g; 1.
SMART; SM00409; IG; 1.
SMART; SM00410; IG_like; 1.
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CARBOHYD
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
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SUBCELLULAR LOCATION: Type I membrane protein.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERPAMILY.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
                                     SFTGNNTKNPQETHNNELK--VLVPVLAVLAAAAFVSFII-----YRRTRPHRSYTG
      PW---
                                                                                                                     TTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSRGDVLCCVENVALHQNITSISQAE
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                                                                                                                                                             REHLTSVTLSIRADFPVPSITDIGHPDPNVKR-IRCSASGGFPEPRLAWMEDGEELNAVN
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                                                                                                                                                                                                                                            --LSIISGQVEVWPEYKNRTFPDIIN----NLSLMILALRLSDKGTYTCVVQKNENGSFR 126
                                                                                                                                                                                                                                                                                    YYLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNTATELV 149
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77; Conser
SKPKQEPPIDQLPFWVIIPVSGALVLTAVVLYCLACRHVARWKRTRRNEETVG
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                                                                                                                                                                                                                                                                                                                                                                                                                               Score 177;
Pred. No. 3
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IG-LIKE V-TYPE DOMAIN.
IG-LIKE C2-TYPE DOMAIN.
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3.2e-07;
les 120;
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B OR CTLA-4 TO
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Result
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Maximum Match 100%
Listing first 45 summaries
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09GL33

09GL3

09GL3
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064381 mus musculu
Q9bdm9 macaca neme
061238 mus musculu
002838 sus scrofa
099133 bos taurus
09ttfl canis famil
Q9bdm4 macaca mula
09xxx6 felis silve
095116 felis silve
046405 bos taurus
                                                                                                                                                                                                                       042404 gallus gall

Q9bxrl homo sapien

Q9ttf2 canis famil

Q91yv7 mus musculu

035531 rattus norv
                                                                                                                                                                                                                                                                                                                                                Description
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45	44	43	42	41	40	39	38	37	36	35	34	S S	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	
2	2.	•	2	2.	4.	144.5		4	7.	147.5	4	4	S		5	5	5	158.5	9	9	6	9		6	6	9.	169.5	7	
8.4	8.4	•	8.4										8.9	٠		9.4	9.4	9.4	٠			٠		0	0.	•	10.0	0.	
359	357	334	319	290	235	235	289	288	584	306	297	288	149	526	321	304	288	290	524	321	290	288	323	292	292	323	275	321	
4	4	4	4	11	σ	0	σ	σ	4	11	σ	თ	11	4	11									0	σ	σ	σ	11	
P78410	015338	Q9BU81	000477	Q9EP73	Q9NOTO	Q9TQS8	Q28347	Q9BDN6	000478	Q9R1Z9	Q9BE99	Q9TT70	L Q62810	Q9H458	055202	Q9TQX1	077684	Q62680	Q921K7	Q6262 4	Q9NZQ7	Q28499	Q9BDM2	002758	Q9GMZ8	Q9BDB8	Q9BDN9	035187	
8410 homo	homo:	81 homo	000477 homo sapien	73 mus 1) canis	Q9tqs8 canis famil	Q28347 cercocebus	cerco	homo	Q9r1z9 mus musculu	Q9be99 sus scrofa	Q9tt70 sus scrofa	62810 ratt	ω σ	2 rattu	Q9tqx1 canis famil	077684 macaca neme	Q62680 rattus norv	Q921k7 mus musculu	rat	omo sa	aca	2 cercopi	02758 felis	8	8	bdn9 papio an	O35187 rattus norv	

ALIGNMENTS

64	Qy 86 VSVTYYI	Db 5 GYGFLLI	Qy 30 GLGLFLI	Best Local Similarity Matches 106; Conser	Query Match	DR SMART; SMO04 SQ SEQUENCE 2		Pfam; PFO	DR Interpro; IF	InterPro;	DR EMBL; Y08823		RC STRAIN-WHITE LEGHORN;		OX NCBI_TaxID=9031;			OS Gallus gallu	DT 01-DEC-2001			ID 042404	RESULT 1
: : : : : : :	VSVTYYLPYKSPGINVD-SSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNT 144	GYGFLLLFLHILRAVTALEKIISKPGDNATLSCIYAN-RGFDLDSLRVYWQIDGVEGSKS 63	GLGLELLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHFNLSGLYVYWQIENDE 85	35.6%; Pred. No. 1.7e-23; vative 47; Mismatches 122; I		410; IG_like; 1. 296 AA; 33155 MW; 061572FEB238CC76 CRC64;	SMART; SM00409; IG; 1.	7; 19; 2.	IPROUSEUU; IG_LIKE.	IPR003599; Ig.	EMBL; Y08823; CAA70058.1;	"Chicken CD28 ligands.";	LEGHORN;	M N.A.	031;	Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Gallus gallus (Chicken).	(Tremburel 0), Last annotation update)	Ç,	ı I	PRELIMINARY; PRT; 296 AA.	

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RESULT
Q9TTF2
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Q9BXR1
ID Q9
AC Q9
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Best Local S
tches 86
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SMART; SM00409; IG; 2.
SMART; SM00408; IGc2; 2.
SMART; SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chapoval A.I., Ni J., Lau J.S., Wilcox R.A., Dong H., Sica G.L., Zhu G., Tamada K., Chen "B7-H3: A costimulatory molecule for T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9BXR1;
01-JUN-2001 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                 Immunoglobulin
SEQUENCE 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           production."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
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                                                                                                                                                                                                                                      12 VHVG----AALGALWFCLTGALEVQVPEDPVVALVGTDATLCCSFSPEPGFSLAQLNLIW 67
                                                                                                                                                                                                    QIENPEVSVTYYLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTC- 138
                                                                                                                                                                                                                                                           LHVSSGFFSGLG-LFLLLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHFNLSGLYVYW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QNNGSST--GSHKDAAKGGQGAQAAAVVSVVILMAFLTVLICWLWRRRSFQLVSYTAP
                                                HG--
                                                                    TSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFV
                                                                                              AEVFWQDGQGVPL-
                                                                                                                 PNLYWINTTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSRGDVLCCVENVALHQNI 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VSIRDFGSAA---
                                                                                                                                                        ---RVFMNTATELVKILEEVVRLRVAANFSTPVISTSDSSN--PGQERTYTCMSKNGYPE
                                                                                                                                                                                        QLTDTKQLVHSF----AEGQDQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGNNTKNPQETHNNELK----VLVPVLAVLAAAAFVSFII----YRRTRPHRSYTGP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATELYKILEEVVRLRVAANFSTPVIS--TSDSSNPGQERTYTCMSKNGYPEPNLYWINTT
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AF302102; AAK15438.1; -
Pro; IPR003599; Ig
                                                                                                                                                                                                                                                                                      , 98
                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                       IPR003006;
                                             ·SVTITGQPMTFPPEALWVTVGLSVCLIALLVALAFV
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IPR003600;
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                                                                                                                                                                                                                                                                                                                                 domain.
AA; 33791 MW;
                                                                                           -TGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSCLVRNPVLQQDA
                                                                                                                                          -----VSLQVAAPYSKPSMTLEPNKDLRPGDTVTITCSSYRGYPE
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Ig_like.
                                                                                                                                                                                                                                                                                  14.6%; Score 246; Di
30.6%; Pred. No. 3.60
tive 42; Mismatches
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17,
19,
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Last annotation updat
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3.6e-13;
hes 123;
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activation
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RESULT 4
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Best Local S
Matches 78
  Matches
                       Query Match
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01-MAY-2000 (3
01-JUN-2001 (3
B7-2 PROTEIN.
                                      Strausberg R.;
Strausberg R.;
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ EMBL; BC013807; AAH13807.1; -.
SEQUENCE 309 AA; 34714 MW; 61593C49EFCB0CE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR003006; Ig_MHC.
InterPro; IPR003596; Ig_v.
InterPro; IPR003596; Ig_v.
SMART; SM00406; IGv; 1.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
SEQUENCE 329 AA; 37774 MW; D98BB
                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                                                                                                                                                   Q91YV7;
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
CD86 ANTIGEN.
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Mammalia; Eutheria; Carnivora;
                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                Q91YV7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunogenetics 50:349-353(1999).
EMBL; AF106826; AAF17297.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yang S., Sim G.-K.;
"New Forms of Dog CD80 and CD86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Canis familiaris (Dog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Molecules."
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                                                                                                                                                                                                                                                                                                             ITSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFIIYRRTRPHRSYTGP
                                                                                                                                                                                                                                                                                                                                                  TAL---QNNTYYLNKLGLYDVISTL--RLPWTSRGDVLCCVE------NVALHQN 252
                                                                                                                                                                                                                                                                                                                                                                                    QMNSDLSVLANFSQPEIMVTSNRTENSGIINLTCSSIQGYPEPKEMYFLVKTENSSTKYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LFVMTLLLYGAASMKSQ--AYFNKTGELPCHFTNSQNISLDELVVFWQDQDKLVLYELYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LFLLLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHFNLSGLYVYWQIENPEVSVTYYL
                                                                                                                                                                                                                                                                                                                                      TVMKKSQNNVT - - - -
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                                                                                                                                                                                                                                                                                                                                                                                                                                               PYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNTATELVKIL
 64;
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             Similarity
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0 (TrEMBLrel. 13,
1 (TrEMBLrel. 17,
 Conservative
                                                                                                                                                                                                                                PRELIMINARY;
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                                                                                                                                 Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.7%;
26.1%;
            10.7%;
23.8%;
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                                                                                                                                                                                                                                                                                        PDGDHILWIAALLVMLVILCGMVF--FLTLRKRK--KKQPGP
53;
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Last sequence update)
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Last annotation updat
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Pred. No. 1.5e-07;
6; Mismatches 123;
            Score 180; DB 11;
Pred. No. 1.7e-07;
                                                                                                                                Craniata; Ver
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                61593C49EFCB0CE5
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  Mismatches
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                                                                                                                                 Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
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                                               CRC64;
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                        Length 309;
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  Indels
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Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Secreted
  24;
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 Gaps
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 8
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OM protein - protein search, using sw model

October 23, 2002, 13:27:51; ; Search time 14.6361 Seconds (without alignments) 1890.790 Million cell updates/sec

Title: Perfect score: US-09-728-420C-12 1495

Sequence: 1 MRLGSPGLLFLLFSSLRADT.....VAVAIGWVCRDRCLQHSYAG 288

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 283138 seqs, 96089334 residues

Minimum DB Maximum DB seq length: 0 length: 2000000000

number of hits satisfying chosen parameters:

283138

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 s

summaries

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	80	7	5.	51	.4	ω	2	1	No.	Result
108.5	109.5	110	111.5	112	114	114	114	115	115.5	117.5	122	123	124	133.5	133.5	135	139	140.5	142.5	145.5	158	164.5	165.5	171	171.5	179	182	194.5	Score	
7.3	7.3	7.4	7.5	7.5	7.6	7.6	7.6	7.7	7.7	7.9	8.2			8.9	٠	9.0	9.3	9.4	9.5	9.7	10.6	11.0	11.1	11.4	11.5	12.0	12.2	13.0	Match	
1896	978	299	569	503	702	662	647	739	1256	946	646	333	278	513	509	299	274	321	289	309	330	288	329	526	275	526	309	487	Length	
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T08851	S16385	S56749	A46462	JC5287	A36319	T16525	B41288	A41288	T03096	A47299	I38049	A31923	TDRTOX	JC5289	JC5288	I46690	A47639	I54766	G00031	I49503	146691	A45803	A48754	A37821	JC7604	S70587	I49522	\$65133	ID	
Down syndrome cell	macrophage colony-	junctional adhesio	T cell activation	SHP substrate-1 pr	carcinoembryonic a	hypothetical prote	vascular cell adhe	vascular cell adhe	CDO protein - rat	н		amalgam protein pr	OX-2 membrane glyc	SHP substrate-1 pr	SHP substrate-1 pr	CD80 precursor - r	OX-2 membrane glyc	B-lymphocyte activ	B7 protein - red-c	B-lymphocyte activ	CD86 precursor - r	B-cell-restricted	B7-2 antigen - hum	≅		butyrophilin precu	gene B7-2 protein	butyrophilin - mou	Description	

A;Title: Murine B7-2, an alternative CTLA4 counter-receptor that costimulates T cell A;Reference number: I49522; MUID:94065585 A;Accession: I49522

A; Status: preliminary; translated from GB/EMBL/DDBJ

A; Cross-references: A; Molecule type: mRNA A; Residues: 1-309 < RES>

GB:L25606; NID:g432478; PIDN:AAA79770.1; PID:g432479

R;Freeman, G.J.; Borriello, F.; Hodes, R.J.; Reiser, H.; Gribben, J.G.; Ng, J.W.; Kim J. Exp. Med. 178, 2185-2192, 1993

gene B7-2 protein - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 23-Jul-1999
C;Accession: I49522

I49522

44	42	39 40	3 7	36	ω n 4-	$^{3}_{3}$	32	ب ب	30
102.5	103 103	104 103.5	105 104.5	105	105.5	106	107	107	107
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351 1091	538 739 1880	1051 976	246	588	477	584	1098	1087	234
221	งผพ	<u> </u>	N N	2	ـــ ــ	Ν	Н	2	N
S39603 A58532	JC2457 JN0581 T18531	A39712 TVMSMD	A45254 A47712	JH0506	173631	150419	PFMSRB	I51552	S14237
class I histocompa glial cell membran	vascular cell adhe vascular medicina tractin - medicina	kinase-like protei macrophage colony-	surface glycoprote myelin/oligodendro	adhesion molecule	brain-derived neur	s-gicerin precurso	platelet-derived g	platelet-derived g	Ig kappa chain pre

ALIGNMENTS

R;Ishii, T.; Aoki, N.; Noda, A.; Adachi, T.; Nakamura, R.; Matsuda, Biochim. Biophys. Acta 1245, 285-292, 1995
A;Title: Carboxy-terminal cytoplasmic domain of mouse butyrophilin : A;Reference number: S65133; MUID:96125722
A;Accession: S65133 Вþ рь Qy DЪ Qy 밁 Qy A; Status: preliminary A; Molecule type: mRNA A; Residues: 1-487 <ISH> butyrophilin - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 05-Nov-1999
C;Accession: S65133 A;Cross-references: GB:S80642; NID:g1246078; PIDN:AAB35893.1; PID:g1246079 Query Match Matches 170 115 144 Watch 13.0%; Score 194.5; DB 2; Local Similarity 31.6%; Pred. No. 5.6e-08; Nismatches 93; 59 84 25 VRAMVGS-DVELSCACPEGSRFDLNDVYVYWQTSESKTVVTYHIPQNSSLENVDSRYRNR 83 1 VLALVGSDDAELTCGFSPNASSEYMELLWFROT-RSTAVLLYRDGQEQEGQQM-TEYRGR 58 LRIARTPSVNIGCCIENVLLQQNLTV : |: : |: || | | | | SAPHSPSQDELTFTCTSINGYPRPNVYWINKTDN-SLLDQALQNDTVFLNMRGLYDVVSV 202 ATLATAGLLDGRATLLIRDVRFSDQGEYRCL-FKDNDDFEE----AAVYLKVAAVGSDPQI 114 ALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSLGFQEVLSVEVTLHVAANFSVPVV 143 MMISDSSIKNMSCCIQNILLGQGKEV 195 SMT-VQENGEMELECTSSGWYPEPQVQW--RTGNREMLPST--SDSKKHNEEGLFTVAVS 169 Length 487; Indels 13; specifically assoc 9;

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JC7604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
$70587
butyrophilin precursor - human
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 14-Feb-1997 #sequence_revision 13-Mar-1997 #text_change
C;Accession: $70587
R;Taylor, M.R.; Peterson, J.A.; Ceriani, R.L.; Couto, J.R.
Blochim. Biophys. Acta 1306, 1-4, 1996
A;Title: Cloning and sequence analysis of human butyrophilin rev
A;Reference number: $70587; MUID:96201696
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A;Cross-references: EMBL:U39576; NID:g1326082; PIDN:AAC50489.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-526 <TAY>
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A;Gene: B7-2
C;Superfamily: B7-2
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                                                                                                                  CLLVVVAVAIG 274
                                                                                                                                                                              RIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERDKITENPVSTGEKNAATWSILAVL 263
                                                                                   ILMVLGLLTIG
                                                                                                                                                     IIRDTSTKNVSCYIQNLLL--
                                                                                                                                                                                                                SM-QVQENGEICLECTSVGWYPEPQVQWRTSKGEKFPSTSESRNP---DEEGLFTVAASV
                                                                                                                                                                                                                                                 SAPHSPSQDELTFTCTSINGYPRPNYYWINKTDNSLLDQALQNDTVFLNMRGLYDVVSVL 203
                                                                                                                                                                                                                                                                                   ATLVQDGIAKGRVALRIRGVRVSDDGEYTCF-FREDGSYEEAL---VHLKVAALGSDPHI 150
                                                                                                                                                                                                                                                                                                                                                   ILAVVGEDAELPCRLSPNASAEHLE----LRWFRKKVSPAVLVHRDGREQEAEQMPEYRGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ILQQTLT---ELSVIANFSEPEIKLAQNVTGNSGINLTCTSKQGHPKPKKMYFLITNSTN 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLLFLLFSS--LRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESKTVVT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EHYLGTEKLDSVNAKYLGRTSFD-----RNNWTLRLHNVQIKDMGSYDCFIQKKPPTGSI 121
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70; Conserv
 variant CD86 deltaTM
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Pred. No. 3.2e-07;
51; Mismatches 117;
 isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 179; DB 2; Pred. No. 1.1e-06;
                                                                                                                                                GQEKKVEISIPASSLPRLTPWIVAVAV
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C; Species: Homo sapiens (man)
C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 30-Jun-2001
C;Accession: JC7604
R;Magistrelli, G; Caron, G; Gauchat, J.F.; Jeannin, P; Bonnefoy, J:Y.; Delneste, Biochem. Biophys. Res. Commun. 280, 1211-1215, 2001
A;Title: Identification of an alternatively spliced variant of human CD86 mRNA.
A;Reference number: JC7604; MUID:21092744; PMID:11162656
A;Accession: JC7604
A;Mccession: JC75604
A;Mccession: JC7604
A;Mccession: JC7604
A;Residues: 1-375 < MAG>
C;Comment: This CD86 variant expressed by activated human monocytes, is a costimula C;Genetics:
A;Gene: cd86deltaTM
C;Keywords: immune response
                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-526 <JAC>
A;Cross-references: GB:M3:
C;Keywords: transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     butyrophilin - bovine
C:Species: Bos primigenius taurus (cattle)
C:Date: 30-Apr-1991 #sequence_revision 30-Apr-1991
C:Accession: A37821
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A;Accession: A37821
A;Status: preliminary
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J. Biol. Chem. 265, 14481-14486,
A;Title: Cloning and analysis of
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                                  LGFQEVLSVEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSL 179
                                                                                                          KTVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQS 119
                                                                                                                                               LIFILLQLPKLDSAPFDVIGPQEPILAVVGEDAELPCRL--SPNVSAKGMELRWFREKVS
                                                                       PAVFVSREGQEQEGEEM-AEYRGRVSLVEDHIAEGSVAVRIQEVKASDDGEYRCF-FRQD
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24.3%;
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                                                                                                                                                                                                                                          Score 171; DB 2;
Pred. No. 4.8e-06;
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Pred. No. 1.9e-06;
5; Mismatches 112;
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-GEIQLECTSVGWYPEPQVQWRTHRGEEF
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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

OM protein - protein search, using sw model

Run on: October 23, 2002, 13:23:41; Search time 8.49836 Seconds (without alignments) 1312.163 Million cell updates/sec

Title:
Perfect score:
Sequence:

US-09-728-420C-12
1495
1 MRLGSPGLLFLLFSSLRADT......VAVAIGWVCRDRCLQHSYAG 288

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 105224 seqs, 38719550 residues

number of hits satisfying chosen parameters: 105224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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MOG_MOUSE	PTK7_HUMAN	PVR1_PIG	CD1A_PIG	LACH_SCHAM	ICCR_DROME	LY9_MOUSE	JAM1_BOVIN	LAR_DROME	PVR2_MOUSE	MOG_RAT	MOG_HUMAN
Q61885 л											
nus musculu	homo sapien	sus scrofa	sus scrofa	schistocerc	drosophila	mus musculu	bos taurus	drosophila	mus musculu	rattus norv	homo sapien

ALIGNMENTS

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SEQUENCE FROM N.A. TISSUE-Brain; MEDLINE=98403880; PubMed=9734811; Ishikawa KI., Nagase T., Suyama M., Miyajima N., Tanaka A., Kotani H., Nomura N., Ohara O.; "Prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro."; DNA Res. 5:169-176(1998). [5] SEQUENCE FROM N.A. (ISOFORM 2). Ling V., Dunussi-Joannopolulos K.; "G150 molecules and uses therefor.";	SEQUENCE FROM N.A. (ISOFORM 1). TISSUE-Dendritic cell; MEDLINE-20477846; PubMed=11023515; Wang S., Zhu G., Chapoval A.I., Dong H., Tamada K., Ni J., Chen L.; "Costimulation of T cells by B7-H2, a B7-like molecule that binds ICOS."; Blood 96:2808-2813(2000). SEQUENCE FROM N.A. (ISOFORM 1), AND CHARACTERIZATION. TISSUE-Peripheral blood lymphocytes; MEDLINE-20465019; PubMed=11007762; Yoshinaga S.K., Zhang M., Pistillo J., Horan T., Khare S.D., Miner K., Sonnenberg M., Boone T., Brankow D., Dai T., Delaney J., Han H., Hui A., Kohno T., Mancukian R., Whoriskey J.S., Coccia M.A.; "Characterization of a new human B7-related protein: B7RP-1 is the ligand to the co-stimulatory protein ICOS."; Int. Immunol. 12:1439-1447(2000). SEQUENCE FROM N.A. (ISOFORM 2). TISSUE-Fukocyte; MEDLINE-20126021; PubMed=10657606; Ling V., Wu P.W., Finnerty H.F., Bean K.M., Spaulding V., Fouser L.A., Jacobs K.A., Collins M.; "Identification of GLSO, a novel B7-like protein that functionally binds to ICOS receptor."; 1 Immunol. 164:1653-1657(2000).	UMAN COL_HUMAN COL_HUMAN COL_HUMAN 75144; Q9NRQ1 5-JUL-1999 (F 6-OCT-2001 (F 6-OCT-2001 (F 6-OCT-2011 (F 6-OCT-2011 (F 0-OCT-2011 (F 0-OCT-201

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Matches 288;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -i- SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN
-i- SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN
-i- CAUTION: Ref. 4 sequence differs from that shown in posit
                                                                                                                                                         CARBOHYD
                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                           Immunoglobulin domain; Signal;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARE PRODUCED BY ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: ISOFORM 1 IS WIDELY EXPRESSED (BRAIN, HEART, KIDNEY, LIVER, LUNG, PANCREAS, PLACENTA, SKELETAL MUSCLE, BONE MARROW, COLLON, OVARY, PROSTATE, TESTIS, LYMPH NODES, LEUKOCYTES, SPLEEN, THYMUS AND TONSIL), WHILE ISOFORM 2 IS DETECTED ONLY IN LYMPH NODES, LEUKOCYTES AND SPLEEN.

INDUCTION: CONSTITUTIVE EXPRESSION IS FURTHER ENHANCED BY TREATMENT WITH TWF-ALPHA IN PERIPHERAL BLOOD B-CELLS AND MONOCYTES, WHILE IT IS DECREASED IN DENDRITIC CELLS.

SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. BIN/MOG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ent number WO0121796, 29-MAR-2001.
FUNCTION: LIGAND FOR THE T-CELL-SPECIFIC CELL SURFACE RECEPTOR ICOS. ACTS AS A COSTIMULATORY SIGNAL FOR T-CELL PROLIFERATION AN CYTOKINE SECRETION: INDUCES ALSO B-CELL PROLIFERATION AND DIFFERENTIATION INTO PLASMA CELLS. COULD PLAY AN IMPORTANT ROLE MEDIATING LOCAL TISSUE RESPONSES TO INFLAMMATORY CONDITIONS, AS WELL AS IN WODULATING THE SECONDARY IMMUNE RESPONSE BY COSTIMULATING MEMORY T-CELL FUNCTION (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               onward for an unknown reason.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Type I membrane protein (By similarity)
ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBFAMILY
              MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK
MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK
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SM00410; IG_like; 1.
                                                                    Similarity
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                                                     Conservative
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Ig_like.
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CYTOPLASMIC (POTENTIAL).
IG-LIKE V-TYPE DOMAIN.
IG-LIKE C2-TYPE DOMAIN.
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Pred.
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EXTRACELLULAR (POTENTIAL).
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Yoshinaga S.K., Whoriskey J.S., Khare S.D., Sarmiento U., Guo J., Horan T., Shih G., Zhang M., Coccia M.A., Kohno T., Tafuri-Bladt Brankow D., Campbell P., Chang D., Chiu L., Dai T., Duncan G., Elliott G.S., Hui A., McCabe S.M., Scully S., Shahinian A., Shaklee C.L., Van G., Mak T.W., Senaldi G.;

"T-cell co-stimulation through B7RP-1 and ICOS.";

Nature 402:827-832(1999).
                      --- mark variants: lymphoid regulation of molecules.";
J. Tmmw---
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SEQUENCE FROM
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TISSUE-Peripheral blood lymphocytes;
MEDLINE-21286479; PubMed-11390480;
                                                                                                                                 Leonard J.P., Hunter S.E., Zollner R., Jacobs K.A., Collins M.; "Identification of GL50, a novel B7-libinds to ICOS receptor."; J. Immunol. 164:1653-1657(2000).
                                                                                                                                                                                         SEQUENCE FROM N.A. (ISOFORM 1).
STRAIN=C3H/HeJ; TISSUE-Fetal thymus;
MEDLINE=20126021, PubMed=10657606;
Ling V., Wu P.W., Finnerty H.F., Beal
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[3]
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"B7h, a novel
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01-MAR-2002
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(Rel. 41, Last annotation update)
precursor (B7 homolog 2) (B7-H2)
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-!- FUN
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SMART; SM00410; IG_like; 1.
B-cell activation; Immune response; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
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    CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                        Immunoglobulin domain; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:1354701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ent number WO0121796, 29-MAR-2001.
FUNCTION: LIGAND FOR THE T-CELL-SPECIFIC CELL SURFACE RECEPTOR ICOS. ACTS AS A COSTIMULATORY SIGNAL FOR T-CELL PROLIFERATION AND CYTOKINE SECRETION; INDUCES ALSO B-CELL PROLIFERATION AND DIFFERENTIATION INTO PLASMA CELLS. COULD PLAY AN IMPORTANT ROLE IN MEDIATING LOCAL TISSUE RESPONSES TO INFLAMMATORY CONDITIONS, AS WELL AS IN MODULATING THE SECONDARY IMMUNE RESPONSE BY COSTIMULATING MEMORY T CELL FUNCTION. DURING PREGNANCY, MAY FUNCTION TO SKEW THE CYTOKINE OF MATERNAL T-CELLS TOWARD IMMUNOPROTECTIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NONLYMPHOID TISSUES, SUCH AS BRÂIN, HEART, KIDNEY, LIVER, LUNG, SKELETAL MUSCLE AND TESTIS. PRESENT ON FRESHLY ISOLATED SPLENIC B. CELLS, T-CELLS, DENDRITIC CELLS AND MACROPHAGES. THE EXPRESSION OF ISOFORM 2 IS RESTRICTED TO HEART, SPLEEN AND KIDNEY. DEVELOPMENTAL STAGE: DETECTED EARLY IN HEMOPOIESIS: IN THE YOLK SAC AT 11.5 AND 12.5 DPC AND, TO A LESSER EXTENT, IN THE LIVER AT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND ARE PRODUCED BY ALTERNATIVE SPLICING.
TISSUE SPECIFICITY: ISOFORM 1 HIGHEST EXPRESSION IN LYMPHOID
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een the Swiss Institute of Bio
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AX100591;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF216747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an email to license@isb-sib.ch).
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                                        institutions as long
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IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN.
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POLY-ALA.
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POTENTIAL.
CYTOPLASMIC (POTENTIAL).
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BUTY_MOUSE
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Q62556; P973
Q1-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
SEQUENCE
                                                                                                                                         Ishii T., Aoki N., Noda A., Adachi T., Nakamura R., Matsuda T.;
"Carboxy-terminal cytoplasmic domain of mouse butyrophilin
specifically associates with a 150-kDa protein of mammary epithel:
cells and milk fat globule membrane.";
ells and milk fat globule membrane.";
liochim. Biophys. Acta 1245:285-292(1995).
-I- FUNCTION: MAY FUNCTION IT THE SECRETION OF MILK-FAT DROPLETS.
MAY ACT AS A SPECIFIC MEMBRANE-ASSOCIATED RECEPTOR FOR THE
ASSOCIATION OF CYTOPLASMIC DROPLETS WITH THE APICAL PLASMA
ASSOCIATION OF CYTOPLASMIC DROPLETS WITH THE APICAL PLASMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Butyrophilin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1997 (Rel.
15-JUL-1998 (Rel.
16-OCT-2001 (Rel.
                             <del>:</del>
                                                                                                                                                                                                                                                              TISSUE=Mammary gland;
MEDLINE=96125722; PubMed=8541302;
                                                                                                                                                                                                                                                                                             SEQUENCE OF 39-487 FROM N.A.
                                                                                                                                                                                                                                                                                                                                       butyrophilin
                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=97148936;
                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=129;
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BTN1A1 OR BTN.
                                                                                                                                                                                                                                                                                                                          Mamm.
                                                                                                                                                                                                                                                                                                                        ygg S.L., Komaragiri M.V.S., Mather I.H.;
'Structural organization and mammary-specific expression of
utyrophilin gene.';
'jamm. Genome 7:900-905(1996).
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                                                     MEMBRANE (BY SIMILARITY).

SUBUNTT: SEEMS TO ASSOCIATE WITH XANTHINE DEHYDROGENASE/OXIDASE.

SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICTY: EXPRESSED IN MAMMARY TISSUE AND SECRETED IN

ASSOCIATION WITH THE MILK-FAT-GLOBULE MEMBRANE DURING LACTATION.

DEVELOPMENTAL STAGE: EXPRESSION INCREASES DURING THE LAST HALF O
SUBFAMILY.
SIMILARITY:
                           SIMILARITY: BELONGS
                                            PREGNANCY AND IS
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322
                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Mammary gland;
18936; PubMed=8995761;
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CONTAINS
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36, Last sequence update)
40, Last annotation update)
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                                            MAXIMAL DURING LACTATION
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MW.
IMMUNOGLOBULIN-LIKE
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Pred. No. 7.
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                             IMMUNOGLOBULIN
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                             SUPERFAMILY.
   V-TYPE DOMAIN
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RESULT
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Best Local
  01-NOV-1995 (Rel. 32, Createu, 01-NOV-1995 (Rel. 32, Last sequence update) 01-NOV-1995 (Rel. 32, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update) Tlymphocyte activation antigen CD86 precursor (Activation antigen) (Early T cell costimulatory molecule-1) (ETC-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00047; 1g; 1.
Pfam; PF00622; SPRY; 1.
SMART; SM00406; IGY; 1.
SMART; SM004449; SPRY; 1.
Transmembrane; Glycoprote
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musculus (Mouse)
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IPR003596; Ig_v.
IPR003877; SPRY.
IPR003878; SPRY_domain.
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Pred. No. 4.4e-10;
7; Mismatches 95;
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333F4DE2C7704480 CRC64;
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EXTRACELLULAR (POTENTIAL).
POTENTIAL.
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EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Molecular cloning and expression of early molecule1 and its characterization as B7-2 J. Immunol. 152:4929-4936(1994).
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MEDLINE-94065585; PubMed=7504059;
Freeman G. J., Borriello F., Hodes R.J., Reiser H., Gribben J.G.,

Ng J.W., Kim J., Goldberg J.M., Hathcock K., Laszlo G., Lombard L.A.,

Mang S., Gray G.S., Nadler L.M., Sharpe A.H.;

"Murine B7-2, an alternative CTLA4 counter-receptor that costimulates

T cell proliferation and interleukin 2 production.";

Exp. Med. 178:2185-2192(1993).
                SIGNAL
                             Receptor
                                                         PROSITE;
                                                                                  InterPro; IPR003006;
InterPro; IPR003596;
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                                          [mmunoglobulin
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NCBI_TaxID=10090;
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Mammalia; Eutheria;
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                                                                                                           L; U39465; AAC52336.1
L; U39466; AAC52336.1
L; S70108; AAB30744.2
; MGI:101773; Cd86.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: RECEPTOR INVOLVED IN THE COSTIMULATORY SIGNAL ESSENTIAL FOR T LYMPHOCYTE PROLIFERATION AND INTERLEUKIN 2 PRODUCTION, BY BINDING CD28 OR CTLA-4. MAY PLAY A CRITICAL ROLE IN THE EARLY EVENTS OF T CELL ACTIVATION AND COSTIMULATION OF NAIVE T CELLS, SUCH AS DECIDING BETWEEN IMMUNITY AND ANERGY THAT IS MADE BY T CELLS WITHIN 24 HOURS AFTER ACTIVATION.

SUBCELLULAR LOCATION: Type I membrane protein.

SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICITY: EXPRESSED ON ACTIVATED B CELLS.

SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN LIKE C2-Type DOMAIN.

SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.

SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
                                                                                                                                                                                               1.25606;
U39459;
U39461;
U39462;
U39462;
U39464;
U39465;
U39466;
U39466;
U39466;
U39467;
U39467;
U39467;
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U39464; AAC52336
                                                                     SM00406; IGV;
                                                         PS00290;
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AAC52334.
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                                         domain;
                                      IG_MHC; FALSE
nain; T-cell;
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                                                                                               Ig_MHC
                                                                                                                                                                    JOINED.
                                    FALSE_NEG.
cell; Glycoprotein;
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 T LYMPHOC:
LYMPHOCYTE ACTIVATION ANTIGEN CD86
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Result
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Maximum Match 100%
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Maximum DB
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         number of hits satisfying chosen parameters:
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seq length: 2000000000
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Gapop 10.0 , Gapext 0.5
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Copyright (c) 1993 - 2002 Compugen Ltd
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sp_rodent:*
sp_virus:*
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      2002, 13:25:56;
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   Q94 X404
Q94 X404
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Opsas6 felis silve
Opsas6 mus musculu
Opsas8 mus musculu
Opsas6 muscu
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Q921k7 mus musculu
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mus m	002758 felis silve	elis	O55202 rattus norv	ratt	Omo	homo	homo	homo	homo	homo		homo	homo		Q9jk39 mus musculu	acac	homo	mus	070356 mus musculu	acac		homo	homo	Q9bdb8 cercocebus	O46535 bos taurus	Q9bdm9 macaca neme	Q9bdm4 macaca mula	Q91yv7 mus musculu

ALIGNMENTS

RESULT 1 042404 QУ 밁 DЪ QΥ Query Match 25.6%; Score 383; DB 13; Best Local Similarity 34.3%; Pred. No. 9.5e-29; Matches 103; Conservative 54; Mismatches 111; InterPro; IPR003600; Ig_Nike.
InterPro; IPR003006; Ig_MHC.
Pfam; PF00047; ig; 2.
SWART; SW00409; IG; 1.
SMART; SW00410; IG_Like; 1.
SEQUENCE 296 AA; 33155 MW; 0 042404; "Chicken CD28 ligands.";
Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; Y08823:CAA70058.1; -. CD80-LIKE PROTEIN.
Gallus gallus (Chicken).
Eukaryota, Metazoa, Chordata; Carchosauria; Aves; Neognathae; 01-JAN-1998 (TrEMBLrel. 05, 01-JAN-1998 (TrEMBLrel. 05, 01-DEC-2001 (TrEMBLrel. 19, O'Regan M.N.; STRAIN-WHITE LEGHORN; SEQUENCE FROM N.A Gallus. NCBI_TaxID=9031; InterPro; IPR003599; 61 57 N SKSCSVVHALISGQDNESQQCSQFKNRTQLLWDKLGDGDFSLLLYNVRQSDEHTYKCVVM 120 SESKTYVTYHIPONSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVL 116 RLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQT-----RLGY-GFILLFLHILRAVTALEKIISKPGDNATLSCIYANRG-FDLDSLRVYWQIDGVEG 60 PRELIMINARY; ; Ig. ; Ig_like. ; Ig_MHC. Chordata; Craniata; Vertebrata; Euteleostomi; Neognathae; Galliformes; Phasianidae; Phasianinae; Created)
Last sequence update)
Last annotation updat 061572FEB238CC76 CRC64; A update) Length 296; Indels 32; Gaps 9;

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RESULT
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01-JUN-2001 (TREMBLrel. 17, Las
01-DEC-2001 (TREMBLrel. 19, Las
01-DEC-2001 (TREMBLREL. 19, Las
COSTIMULATORY MOLECULE.
HOMO sapiens (Human).
Eukaryota; Metazoa; Chordata; C
Mammalia; Eutheria; Primates; C
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MEDLINE-21163383; PubMed-11224528;

MEDLINE-21163383; PubMed-11224528;

Chapoval A.I., Ni J., Lau J.S., Wilcox R.A., Flies D.B.

Dong H., Sica G.L., Zhu G., Tamada K., Chen L.;

"B7-H3: A costimulatory molecule for T cell activation
                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR003006; Pfam; PF00047; ig; 2. SMART; SM00409; IG; 2
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Nat. Immun.
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SMART; SM00410; IG_like; 2.
Immunoglobulin domain.
SEQUENCE 316 AA; 33791 MW;
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                                                 NPVLQQD-AHGSVT
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                                                                      NVLLQQNLTVGSQTGNDIGERDKITENPVSTGEKNAATWSILAVLCLLVVVAVAIGWVC
                                                                                                 YPEAEVFWQDGQGVPLTGNVTTSQ
                                                                                                                         YPRPNVYW-----INKTDNSLLDQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIE
                                                                                                                                                     GSFTCFVSIRDFG----
                                                                                                                                                                 QKFHCLVLSQSLGFQEVLSVEVTLHVAANFSVPVVSAPHSPSQ-----DELTFTCTSING
                                                                                                                                                                                                                                                    {\tt RRGSPGMGVHVGAALGALMFCLTGALEVQVPEDPVVALVGTDATLCCSFSPEPGFSLAQL}
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                                                                                                                                                                                                                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR003599;
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102; AAK15438.1;
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: IGC2; 2.
: IG_like; 2.
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Ig_c2.
Ig_like.
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31.1%;
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                                                                                                                                                   -SAAVSLQVAAPYSKP--SMTLEPNKDLRPGDTVTITCSSYRG
                                                                                                                                                                                                    HSFAEGQDQGSAYANRTALFPDLLAQGNASLRLQRVRVADE
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                                                -ITGQPMTFPPE--ALWVTVGLSVCLIALLVALAFVC
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Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                       Score 294.5; DB 4;
Pred. No. 3.6e-20;
0; Mismatches 111;
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-MANEQGLEDVHSVLRVVLGANGTYSCLVR
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Matches 68
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Best Loc
Matches
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SEQUENCE FROM N.A.

MEDLINE-21383618; PubMed=11491535;

MEDLINE-21383618; P., Mayne A.E.,
                                                                                                                                                                                                                                                            "Cloning, sequencing, and homology analysis Fas/Fas-ligand and co-stimulatory molecules. Immunogenetics 53:315-328 (2001).
EMBL; AF344861; AAK37543.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cercopithecus aethiops (Green monkey) (Grivet).
Eukaryota; Metazoa; Chordata; Craniata; Vertebra
Mammalia; Butheria; Primates; Catarrhini; Cercop
Cercopithecinae; Cercopithecus.
                                                                                                                                                                   InterPro; IPR003599; Ig.
InterPro; IPR003596; Ig_v.
SMART; SM00409; IG; 1.
SMART; SM00406; IGv; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-DEC-2001 (TrEMBLrel. 19,
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Q921K7;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
SIMILAR TO BUTTROPHILIN, SUBFAMILY 1, MEMBER A1.
                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CD86 PROTEIN
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostc
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases EMBL; BC011497; AAH11497.1; -. SEQUENCE 524 AA; 58433 MW; 6BDFBEC6E191E224 CRC64;
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  GLLFLLF--SSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESKTVVT
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Pred. No. 1.3e-
37; Mismatches
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                                                                     Score 185;
Pred. No. 1.
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Catarrhini; Cercopithecidae;
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1.4e-09;
hes 120;
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nes 94;
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Result
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                                                                                                                                                                                                              Score
       1495
1495
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1495
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SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT: *
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Listing first 45 summaries
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Copyright (c) 1993 - 2002 Compus
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/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-amh1/**1005
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   ABB10502
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ABB10504
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ABB10322
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AAB67713
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Guinea pig butyrop Feline CD86 (B7-2) Cat CD86 (B7-2) li	Mouse butyrophilin	n gene 2	Human B7-H3 polype	Human polypeptide	Human B7-H3 polype	Human polypeptide	Human polypeptide,	Human gene 2 encod	Human membrane or	Human polypeptide,	Human B lymphocyte	B lympho	Human amyloid prec	Human amyloid prec	_	Human gene 2 encod	Human B7-H3 polype	Human PRO polypept	Human PRO352 (UNQ3	PR035			sequ	Protein encoded by	Amino acid sequenc	acid		Amino acid sequenc	-	Human immunoglobul

ALIGNMENTS

AAB08727;

AAB08727 standard; Protein; 288

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RESULT 1
AAB08727
ID AABC
XX
AC AABC
XX
AC AABC
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XX
 T-lymphocyte activation; T cell proliferation;
                                                                                                                                                                                                                CRP1; CD28 related protein-1; B7RP1; B7 related protein-1; T-lymphocyte activation; type I transmembrane protein; T cell proliferation; T-cell mediated disorder.
03-FEB-1999;
08-MAR-1999;
                                                                                                                                                                         Key
                                                                                                                                                                                                                                                                           02-JAN-2001 (first entry)
                             27-JAN-2000; 2000WO-US01871.
                                                  10-AUG-2000
                                                                     WO200046240-A2
                                                                                                    Domain
                                                                                                                       Domain
                                                                                                                                          Protein
                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                       Amino acid
                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                       sequence of a human B7RP1
99US-0244448
99US-0264527
                                                                                                   /note= "predicted transmembrane domain"
275..302
                                                                                                                      /note= "mature protein"
259..274
                                                                                                                                          /note= "signal peptide" 17..288
                                                                                         /note=
                                                                                                                                                                       Location/Qualifiers
                                                                                         "intracellular domain"
                                                                                                                                                                                                                                                       polypeptide
                                                                                                                                                                                                                          T cell activation;
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RESULT 2
AAB08729
ID AAB0
XX AAB0
AC AAB0
AC AAB1
XX AAB1
XX AAB1
AC AAB1
XX ACAP1
KW CRP1
KW T-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence represents a B7RP1 (B7 related protein-1) polypeptide. The specification also describes a CRP1 (CD28 related protein-1) polypeptide. The polypeptides are involved in T-lymphocyte activation, and represent a receptor-ligand pair. CRP1 and B7RP1 are predicted to be a type I transmembrane protein. The nucleic acids are useful for regulating T cell activation or proliferation in an animal. The polypeptides are useful for treating, preventing ameliorating or diagnosing a T-cell mediated disorder in an animal. They can also be used to identify test molecules that bind to the polypeptides.
                                                                                                                                                                                         T cell
                                             Protein
                                                                                                                                                  Homo sapiens
                                                                                                                                                                                         CRP1; CD28 related protein-1; B7RP1; B7 related protein-1; T-1ymphocyte activation; type I transmembrane protein; T communication; T-cell mediated disorder.
                                                                                                                                                                                                                                                                                                                         02-JAN-2001
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                                                                                      Peptide
                                                                                                                                                                                                                                                                           Amino acid sequence of a human B7RP1 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                         AAB08729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel nucleic acids encoding in the treatment, prevention
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N-PSDB; AAA64556.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQONLTVGSQTGNDIGERD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GFQEVLSVEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              288;
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                                                                                                                                                                                                                                                                                                                                                                                                      standard;
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                                                                                                                                                                                                                                                                                                                    (first entry)
                                           /note= "signal peptide"
17..302
                         /note=
                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                      Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                     "polypeptide"
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and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1495; DB 21; Pred. No. 6.6e-130;
                                                                                                                                                                                                                                                                                                                                                                                                      A
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Best Local Similarity
Matches 288; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence represents a B7RP1 (B7 related protein-1) polypeptide. The specification also describes a CRP1 (CD28 related protein-1) polypeptide. The polypeptides are involved in T-lymphocyte activation, and represent a receptor-ligand pair. CRP1 and B7RP1 are predicted to be a type I transmembrane protein. The nucleic acids are useful for regulating T cell activation or proliferation in an animal. The polypeptides are useful for treating, preventing ameliorating or diagnosing a T-cell mediated disorder in an animal. They can also be used to identify test molecules that bind to the polypeptides.
                 hB7-H2; T cell stimulator; immunosuppression; cancer; AIDS; congenital immune deficiency; cellular immune response; inflammatory condition; autoimmune disease; rheumatoid arthritis;
multiple sclerosis; insulin-dependent diabetes mellitus
                                                                                                       Amino
                                                                                                                                                13-NOV-2001
                                                                                                                                                                                                                                AAG67292 standard; Protein; 302
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N-PSDB; AAA64557.
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08-MAR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                           DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD
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                                                                                                       acid
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99US-0264527
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                                                                                                   human hB7-H2 polypeptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1495; DB 2
Pred. No. 7e-130;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteins CRP-1 and B7RP1 are useful diagnosis of T cell mediated disorders
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                                                                                                                                                                                                                                                                                                                                                                                            use of radiotherapy or immunosuppressive drugs such as certain chemotherapeutic agents, and therefore are particularly useful when given in conjunction with such drugs or radiotherapy. The hB7-H2 nucleic acid and polypeptide can be used to treat conditions involving cellular immune responses, e.g., inflammatory conditions (such as, for example, those induced by infectious agents including Mycobacterium tuberculosis or M. leprae), or other pathologic cell-mediated responses such as those involved in autoimmune diseases (e.g. rheumatoid arthritis), multiple sclerosis, or insulin-dependent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence represents a human polypeptide, designated hB7-H2. The hB7-H2 proteins and i The hB7-H2 proteins and i variants are generally useful as immune response-stimulating therapeutics. For example, the polypeptides can be used for treatment of disease conditions characterized by immunosuppression, e.g., cancer, AIDS or AIDS-related complex, other virally or environmentally-induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 2; Fig 1A; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 multiple sclerosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Domain
                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       conditions, and certain congenital immune deficiencies. They may also be employed to increase immune function that has been impaired by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             An isolated DNA encoding a hB7-H2 polypeptide, useful for treating cancer, AIDS, or autoimmune diseases (e.g. rheumatoid arthritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAH77869,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-MAR-2000; 2000US-0186519
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diabetes mellitus).
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                DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD 240
                                                                                                                                                                                                                             MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK 60
                                                                                     GFQEVLSVEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLL 180
                                                                                                                                                         TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLENVTPQDEQKFHCLVLSQSL 120
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DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD
                                                                   GFQEVLSVEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLL
                                                                                                                                     TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSL 120
                                                                                                                                                                                                       MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK 60
                                                                                                                                                                                                                                                                                                                                                 302 AA;
                                                                                                                                                                                                                                                                             Conservative
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27..135
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136..248
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               utoimmune diseases (e.g. rheumatoid arth or insulin-dependent diabetes mellitus)
                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "signal peptide"
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                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                           Score 1495; DB 22;
Pred. No. 7e-130;
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           graft-versus-host
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated nucleic acid encoding a GL50 polypeptide for modulating immune response and reducing the proliferation of a tumour cell - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAF79921
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   DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD
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Pred. No. 7.2e-130;
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          The present sequence represents a novel human B7-3 protein which acts as a ligand for inducible co-stimulator (ICOS) protein. The B7-3 protein previously referred to as TU-D or KIRAO653 was considered by the 2 groups as being incomplete. The present inventor has determined the sequence to be complete and renamed the sequence as B7-3. Also descrits a soluble form of B7-3 (AAUO0423) which comprises the B7-3 signal sequence and extracellular domain. The extracellular domain is shown bind ICOS which is related to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells. B7-3 proteins as a soluble form of B7-3 considered to CD28 and expressed on T-cells.
                                                                                                                                                     New B7-3 polypeptides useful for modulating inducible co-stimulator protein and for treating ulcers, Crohn's disease, multiple sclerosidiabetes mellitus, infections and allergic diseases
  bind ICOS which polypeptides or
                                                                                                                                Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; B7-3; inducible co-stimulator; ICOS; TU-D; KIAA0653; CD2 T-cell; ICOS-mediated activity; IL-10 production; TH2 activity; Helicobacter pylori induced peptic ulcer; Crohn's disease; multiple sclerosis; type I diabetes mellitus; graft rejection; helminth infection; allergic disease.
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inhibitors of the
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04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
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11-MAR-2000;
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07-JUN-2000;
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                                                                                                                                                                                                                                           Homo sapiens.
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2000US-205515P.
2000US-205515P.
           2000US-214886P
2000US-215135P
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which interacts with the polypeptide or its fragment. B7-3 polypeptides, fragments, tetramer, an agent with an ability to affect B7-3 activity or a specific binding member are useful for modulating an ICOS-mediated activity of T-cells by modulating IL-10 production and TH2 activity, and for manufacturing a medicament for modulating an ICOS-mediated activity of T-cells. B7-3 polypeptides are useful for development of diagnostic, prophylactic and therapeutic agents for diseases such as Helicobacter pylori induced peptic ulcers, Crohn's disease, multiple sclerosis, type I diabetes mellitus, graft rejection, helminth infections, and allergic
                                                                                                                                                                                                                                          Human; gene therapy; neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal disorder; pulmonary disorder; cardiovascular disorder; renal disorder;
                                                                                                                                                                                                                   proliferative disorder;
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                                              The present invention provides human cDNAs, proteins and DNAs. These can be used in the treatment of neural, immu muscular, reproductive, gastrointestinal, pulmonary, car renal and proliferative disorders and inflammation. The is a protein of the invention.
                                                                                                                                                                                                                                                                          Isolated nucleic acid polypeptide is used ir condition
                                                                                                                                                                                                                        Claim
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Best Loc
Matches
     31-JAN-2000

04-FEB-2000

24-FEB-2000

02-MAR-2000

16-MAR-2000

17-MAR-2000

18-APR-2000

07-JUN-2000

28-JUN-2000

29-JUN-2000

07-JUL-2000

07-JUL-2000

07-JUL-2000

11-JUL-2000

11-JU
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proliferative
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287; Conserv
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nilarity 99.7%;
Conservative
     2000US-180628P.
2000US-18464P.
2000US-18974P.
2000US-189874P.
2000US-19974P.
2000US-199129P.
2000US-205515P.
2000US-205515P.
2000US-21486P.
2000US-215135P.
2000US-215135P.
2000US-21748P.
2000US-217496P.
2000US-225118P.
2000US-22513P.
2000US-225213P.
2000US-225213P.
2000US-225214P.
2000US-225256P.
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Pred. No. 1e-129;
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   14-SEP-2000
14-SEP-2000
14-SEP-2000
14-SEP-2000
21-SEP-2000
21-SEP-2000
25-SEP-2000
25-SEP-2000
27-SEP-2000
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29-SEP-2000
02-OCT-2000
03-OCT-2000
03-OCT
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14-AUG-2000

14-AUG-2000

14-AUG-2000

18-AUG-2000

22-AUG-2000

22-AUG-2000

23-AUG-2000

01-SEP-2000

01-SEP-2000
2000US-225779

2000US-225779

2000US-225758P

2000US-22578P

2000US-226681P

2000US-226879

2000US-227829

2000US-229879

2000US-229879

2000US-229344P

2000US-229345P

2000US-2311414P

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polypeptide is used in condition -
                                                                                                                                                                                                                                                                                                                                                                                The present invention provides human cDNAs, proteins and related genomic DNAs. These can be used in the treatment of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders and inflammation. The present sequence
                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                               is a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
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L7-NOV-2000;
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                                               104
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7-NOV-2000;
121 GFQEVLSVEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLL
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                                                                                                                                                            MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK 60
                                          TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSL 120
                                                                                                                                     MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-476161/51.
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2000US-244633P
2000US-2446610P
2000US-2446611P
2000US-244920P
2000US-244920P
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2000US-249211P
2000US-24921P
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99.7%;
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                                                                                                                                                                                                                          Score 1494; D
Pred. No. 1e-1
1; Mismatches
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No. 1e-129;
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                                                                                                                                                                                                                            Indels
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RESULT 8
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ID AAUI1
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19-MAY 2000

28-JUN-2000

30-JUN-2000

07-JUL-2000

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11-JUL-2000

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14-JUL-2000

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17-MAR-2000;
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02-MAR-2000;
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CC Note: The sequence data for this patent did not form part of the printed CC specification, but was obtained in electronic format directly from WIPO CC at fip.wipo.int/pub/published_pct_sequences.
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                                                                                                                                 61
                                                                                                                                                                           69
                                                                                                                                                                                                                                                                                 Local Similarity
                      GFQEVLSVEVTLHVAANFSVEVVSAPHSPSQDELTETCTSINGYPRPNVYWINKTDNSLL 180
                                                                                                                                                                                      MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK 60
                                                                                                       TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDESLRLENVTPQDEQKFHCLVLSQSL 120
GFQEVLSIEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLL
                                                                               TVVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSL
                                                                                                                                                                   MRLGSDGLLFLLESSLRADTQEKEVRAMVGŞDVELSCACPEGSRFDLNDVYVYWQTSESK 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID
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                                                                                                                                                                                                                                                        Conservative
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2000US-0251988.
2000US-0256719.
2000US-0251479.
2000US-0251856.
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2000US-0250391.
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2000US-0249297.
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Pred. No. 1.1e
1; Mismatches
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                                                                                                                                    amount of the new protein in a sample or by determining the presence of mutations in the new genes. Specific uses are described for each of the 52 genes, based on the tissues in which they are most highly expressed, and include developing products for the diagnosis or treatment of
                                                                                                                                                                                                                                                                                        AAF91858-AAF91929 represent cDNAs corresponding to 52 human secreted protein genes, and AAB87342-AAB87413 represent the proteins they encode AAB87414-AAB87444 represent human secreted protein fragments. The genes and their corresponding secreted proteins are useful for preventing, treating or ameliorating medical conditions, e.g., by protein or gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                skin disorder; psoriasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder; anglogenic disorder; kidney disorder; gastrointestinal disorder; pregnancy-related disorder; endocrine disorder.
                        AIDS, autoimmune diseases (e.g., rheumatoid arthritis), infla
allergies, neurological disorders (e.g., Alzheimer's disease,
                                                                             proliferative disorders, cancer, tumours, foetal and developmental abnormalities, haematopoietic disorders, diseases of the immune sy
                                                                                                                                                                                                                                                      treating or ameliorating medical conditions, e.g., by protein or gene therapy. Pathological conditions can be diagnosed by determining the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 11; Page 564-565; 607pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic acid molecules encoding human secreted proteins, used in preventing, treating or ameliorating a disorder, e.g. Alzheimer's and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preventing, treating or ameliora
Parkinson's diseases and cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAF91911.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ni J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-SEP-1999;
03-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-AUG-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immune system disorder; AIDS; autoimmune disease; rheumatoid arthritis; inflammation; allergy; neurological disorder; Alzheimer's disease; Parkinson's disease; cognitive disorder; schizophrenia; asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200118022-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             endocrine disorder; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB87395;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human gene 2 encoded
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  culture; chemotaxis; food additive; ing partner identification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-203081/20.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERD 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PA, Shi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  secreted protein; proliferative disorder; cancer; tumou abnormality; developmental abnormality; haematopoietic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Young
Shi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US24008
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99US-0152317.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birse CE,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Florence KA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pregnancy-related on; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Komatsoulis GA, Ros
Olsen HS, Lafleur
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; tumour
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                                                       inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosen CA;
eur DW;
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                                                                                   system
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disease), cognitive

disorders,

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ABB10504
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Best Local
  31-JAN-2000;
04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
18-APR-2000;
19-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           skin disorders (e.g., psoriasis), sepsis, diabetes, atherosclerosis, cardiovascular disorders, angiogenic disorders, kidney disorders, gastrointestinal disorders, pregnancy-related disorders, endocrine disorders, and infections. The proteins can also be used to aid wound healing and epithelial cell proliferation, to prevent skin aging due to sunburn, to maintain organs before transplantation, for supporting cell culture of primary tissues, to regenerate tissues, to identify their cognate ligands or binding partners, and in chemotaxis, and can be used as a food additive or preservative to modify storage properties. Antibodies specific for a protein of the invention can be used in alleviating symptoms associated with the disorders mentioned above, and inmunoasorbent assay (ELISA). The present sequence represents a human secretic of the invention care represents a human and the careful of the invention can be used in the content of the invention can be used in alleviating symptoms associated with the disorders mentioned above, and inmunoasorbent assay (ELISA). The present sequence represents a human secretic of the invention can be used in the content of the invention can be used in the content of the invention can be used in the content of the invention can be used in the content of the invention can be used in the content of the invention can be used in alleviating symptoms associated with the disorders mentioned above, and inmunoasorbent assay (ELISA). The present sequence represents a human careful of the invention can be used to the careful of the invention can be used in the careful of the invention can be used in the careful of the invention can be used in the careful of the invention can be used to always the careful of the invention can be used to always the careful of the invention can be used to always the careful of the invention can be used to always the careful of the invention can be used to always the careful of the invention can be used to always the careful of the careful of the invention can be 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; gene therapy; neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal disorder; pulmonary disorder; cardiovascular disorder; renal disorder; proliferative disorder; inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ches
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                                                                                                                                                                                                                                                         17-JAN-2001;
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secreted protein of the invention.
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287; Conserv
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2000US-179065P.
2000US-18662BP.
2000US-184664P.
2000US-184550P.
2000US-189874P.
2000US-199074P.
2000US-199075P.
2000US-199123P.
2000US-205515P.
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Pred. No. 2e-129;
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26-JUL-2000;
14-AUG-2000;
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28-JUN-2000;
30-JUN-2000;
07-JUL-2000;
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20-OCT 2000

01-NOV 2000

08-NOV 2000

17-NOV 2000

17-NO
The present invention provides human cDNAs, proteins and related genomic DNAs. These can be used in the treatment of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders and inflammation. The present sequence
                                                                                                                                                 Isolated nucleic acid r polypeptide is used in
                                                                                              Claim 11;
                                                                                                                                                                                                                             2001-476161/51.
                                                                                              SEQ
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2000US - 249264p

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2000US - 249299p

2000US - 249309p

2000US - 250391p

2000US - 2510301p

2000US - 251988p

2000US - 251868p

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2000US - 241787 P.
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2000US - 241809 P.
2000US - 244617 P.
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KW Immu
KW Card
KW Card
KW Tepr
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PR WO2
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31-JN-2000
04-FEB 2000
24-FEB 2000
02-MAR-2000
16-MAR-2000
17-MAR-2000
17-MAR-2000
19-MAY-2000
07-JUN-2000
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14-JUL-2000
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Pred. No. 2.4e-129;
0; Mismatches 1;
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2000US-0225757. 2000US-0225758. 2000US-0225759. 2000US-0226279. 2000US-0226818. 2000US-0226868. 2000US-0227182.

2000US-0228924. 2000US-0229287. 2000US-0229343. 2000US-0227009 2000US-0225268. 2000US-0225270. 2000US-0225447.

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Sequences AAU17977-AAU18087 represent immunoglobulin polypeptides of the CC invention. The polypeptides and their associated polynucleotides can be CC used to diagnose a pathological condition or a susceptibility to a CC pathological condition in a subject by determining the presence or CC absence of a mutation in a DNA sequence or determining the presence or CC amount of expression of the protein. Alternatively the identification of CC a binding partner to a sequence allows determination of changes in CC protein activity. The sequences can be used as research tools for CC receptors or other signal transduction pathway proteins that interact CC with the polypeptides of the invention and can be used to treat, prevent CC or diagnose various types of disorders such as neurological disorders, cardiovascular disorders gastrointestinal disorders, reproductive CC disorders, immune system disorders, renal disorders, muscular disorders, proliferative disorders and cancer.

CC Note: The sequence data for this pattent did not form part of the printed CC specification, but was obtained in electronic format directly from WIPO CC at ftp.wipo.int/pub/published_pct_sequences.
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17-NOV-2000
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N-PSDB;
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RESULT 13
AAU00423
ID AAU00
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                                                                                                                                                                                                                                                                                                                              Human: B7-3; inducible co-stimulator; ICOS; TU-D; KIAA0653; CD28; T-cell; ICOS-mediated activity; II-10 production; TH2 activity; Helicobacter pylori induced peptic ulcer; Crohn's disease; multiple sclerosis; type I diabetes mellitus; graft rejection; helminth infection; allergic disease.
          11-AUG-1999;
                               10-AUG-2000; 2000WO-GB03079.
                                                      22-FEB-2001
                                                                                                          Misc-difference
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                                                                                              "Encoded by
                                                                                                                    "Beta-strand G inhibitors of t
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inhibitors of the interaction
                                                                                                                                                                                                                     "Beta-strand C'
inhibitors of tl
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the interaction of B7-3 with
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2.4e-129;
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MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESK

82.7%; Score 1236; DB 22; 100.0%; Pred. No. 4.4e-106;

Query Match Best Local S Matches 239

al Similarity 239; Conserv

Conservative

0,

Mismatches

Indels Length

0

Gaps

0

60

239;

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CC The present sequence represents human B7-3 soluble form protein which CC acts as a ligand for inducible co-stimulator (ICOS) protein. The B7-3 CC soluble form protein comprises the B7-3 signal sequence and CC extracellular domain. The extracellular domain is shown to bind ICOS CC which is related to CD28 and expressed on T-cells. The B7-3 protein CC (AAU00422) previously referred to as TU-D or KIAA0653 was considered by CC the 2 groups as being incomplete. The present inventor has determined CC the sequence to be complete and renamed the sequence as B7-3. B7-3 CC polypeptides or its fragments are useful for identifying a substance CC which interacts with the polypeptide or its fragment B7-3 polypeptides, CC fragments, tetramer, an agent with an ability to affect B7-3 activity or CC a specific binding member are useful for modulating an ICOS-mediated activity of T-cells by modulating II-10 production and TH2 activity, and CC for manufacturing a medicament for modulating an ICOS-mediated activity of T-cells. B7-3 polypeptides are useful for development of diagnostic, CC prophylactic and therapeutic agents for diseases such as Helicobacter CC prophylactic and therapeutic agents for diseases, multiple sclerosis, type Cd disease mellitus, graft rejection, helminth infections, and allergic
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diabetes
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N-PSDB; AAS00424.
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239 AA;
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RESULT 14
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                                                                                                                                                                                                               DQALQNDTVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGER
                                                                                                                                                                                                                                                             GFQEVLSVEVTLHVAANFSVPVVSAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLL
                                                                                                                                                         Protein;
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GL50; antigen; antigen presenting cell; T cell proliferation; graft-versus-host disease; autoimmune disease; allergy; viral

infection;

acid sequence of hGL50-mIgG2am fusion protein

(first

entry)

Amino 11-JUN-2001 AAB67718;

acquired immune deficiency syndrome; AIDS; vaccine

Mus musculus

Synthetic

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RESULT 15
AAB08725
ID AAB08
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AC AAB08
XX
DT 02-JA
XX
DE Amino
XX
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents a fusion protein, comprising human GL50 (hGL50) and murine IgG2a (mIgG2A). The fusion protein is used in the course of the invention. The specification describes GL50 polypeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-244938/25.
N-PSDB; AAF79941.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       biological sample.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated nucleic acid encoding a GL50 polypeptide for modulating immune response and reducing the proliferation of a tumour cell - \,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-SEP-1999;
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             Amino acid sequence of a murine
                                       02-JAN-2001
                                                                                          AAB08725 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GEMY ) GENETICS INST INC.
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                                                                                                                                                                                                                                                                                                                                68 PQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTDQDEQKFHCLVLSQSLGFQEVLS 127
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                                                                                                                                                                                                                        TVFLNMRGLYDVVSVLRIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERDKITENPV 247
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                                      (first entry)
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96.3%;
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Pred. No. 5.4e-104;
3; Mismatches 4;
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            B7RP1 polypeptide
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Query Match
Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful for regulating T cell activation or proliferation in an animal. The polypeptides are useful for treating, preventing ameliorating or diagnosing a T-cell mediated disorder in an animal. They can also be used to identify test molecules that bind to the polypeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence represents a B7RP1 (B7 related protein-1) polypeptide. The specification describes a CRP1 (CB2 related protein-1) polypeptide. The polypeptides are involved in T-lymphocyte activation, and represent a receptor-ligand pair. CRP1 and B7RP1 are predicted to be a type I transmembrane protein. The nucleic acids are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 12; Fig 2A; 174pp; English.
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08-MAR-1999;
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DKITENPVSTGEKNAATWSILAVLCLLVVVAVAIGWVCRDRCLQH-SYAG
                                                                     LQNDTYFLNMRGLYDVYSYLRIARTPSYNIGCCIENVLLQQNLTYGSQ----TGNDIGER 239
                                                                                                                                              LSVEVTLHVAANFSVPVVSAPHS--PSQDELTFTCTSINGYPRPNVYWINKTDNSLLDQA 183
                                                                                                                                                                                     LPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRVFMNTATELVKI
                                                                                                                                                                                                                        IPONSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLV-LSQSLGFQEV 125
                                                                                                                                                                                                                                                              GLELLLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHFNLSGLYVYWQIENPEVSVTYY
                                 LQNNTVYLNKLGLYDVISTLRLPWTSRGDVLCCVENVALHQNITSISQAESFTGNN----
                                                                                                            LEEVVRLRVAANFSTPVISTSDSSNPGQ-ERTYTCMSKNGYPEPNLYWINTTDNSLIDTA
                                                                                                                                                                                                                                                                                                                                     al Similarity
135; Conserv
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99US-0264527
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47..322
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47..279
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Pred. No. 4.6e-46;
                                                                                                                                                                                                                                                                                                                                           Mismatches
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Db 267 ---TKNPQETHNNEL---KVLVPVLAVLAAAAFVSFIIYRRTRPHRSYTG 310

Search completed: October 23, 2002, 13:29:41 Job time : 26.9672 secs

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Result
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Maximum DB seq length: 200000000
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       number of hits satisfying chosen parameters:
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re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
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     Issued_Patents_AA:*
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Listing first 45 summaries
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Copyright (c) 1993 - 2002 Commun
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/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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     2002, 13:28:41;
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US-08-479-744A-23
US-08-280-757B-23
US-08-205-697A-21
US-08-205-697A-13
US-08-702-525-21
US-08-702-525-13
US-08-702-525-13
US-08-702-525-13
US-08-702-525-23
US-08-101-624-2
US-08-101-624-2
US-08-702-525-23
US-08-702-525-23
US-08-702-525-23
US-08-101-624-2
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21, Appl
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AT TOMBUMO	US-08-456-104-8	US-08-147-772-4	US-08-724-394A-6	PCT-US95-02576-17	US-08-702-525-17	US-08-205-697A-17	PCT-US95-02576-2	US-08-702-525-2	US-08-205-697A-2	US-09-375-419-15	US-08-630-172-15	US-09-171-945-131	US-09-460-384-36	PCT-US95-02576-19	US-08-403-253A-2	US-09-450-798-2	US-08-702-525-19	US-08-205-697A-19
	Sequence 8, Appli	Sequence 4, Appli	Sequence 6, Appli	•	Sequence 17, Appl	Sequence 17, Appl	Sequence 2, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 15, Appl	Sequence 15, Appl	Sequence 131, App	Sequence 36, Appl	Sequence 19, Appl	Sequence 2, Appli	Sequence 2, Appli	Sequence 19, Appl	Sequence 19, Appl

ALIGNMENTS

US-08-456-104-4 RESULT 1

Sequence 4, Application US/08456104 Patent No. 5861310

GENERAL INFORMATION:

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; MOLECULE TYPE: protein US-08-456-104-4
                                                                                                                                          NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: RPI-(
TELECOMMUNICATION: INFORMATION:
TELEPHONE: (617) 227-7400
TELEPAX: (617) 227-740
TELEPAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 309 amino acids
TYPE: amino acid
Query Match
Best Local Similarity
Matches 70; Conserv
                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/101
FILING DATE: 26-JUL-1993;
APPLICATION NUMBER: 08/109
APPLICATION NUMBER: 19-AUG
ATTORNEX/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/456,104 FILING DATE: CLASSIFICATION: 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Freeman, Gordon J.
APPLICANT: Nadler, Lee M.
APPLICANT: Gray, Gary S.
TITLE OF INVENTION: TUMOR CELLS MODIFIED TO EXPRESS B7-2 AND B7-3 WITH INCREASE
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
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CITY: Boston
STATE: Massac
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OPERATING SYSTEM: PC-DOS/MS-DOS
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ZIP: 02109
                                                                                                                               TOPOLOGY:
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60 State Street, Suit
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                   12.2%; Score 182; DB 2
23.6%; Pred. No. 3e-10;
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19-AUG-1993
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                                      DB 2; Length 309;
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Conservative

61;

Mismatches

117;

Indels

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Gaps

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    Query Match
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                                                                                                                                                             TELEFAX: (617) 227-594 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-479-744A-23
                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 309 amino acids
                                                                                                                                                                                                                      FILING DATE: 3-NOV-1993
ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: RPI-004CP3
TELECOMMUNICATION INFORMATION:
                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Freeman, Gordon J.
APPLICANT: Nadler, Lee M.
APPLICANT: Gray, Gary S.
TITLE OF INVENTION: No. 6084067el CTLA4/CD28 Ligands and
TITLE OF INVENTION: Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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ADDRESSEE: LAHIVE & COCKFIELD, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RRENT AFFIACION NUMBER: US/UB/
APPLICATION NUMBER: US/UB/
FILING DATE: June 7, 1995
FILING DATE: 435
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                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 08/109,393
FILING DATE: 28 AUG-1993
APPLICATION NUMBER: 08/101,624
FILING DATE: 26 -7ULY-1993
APPLICATION NUMBER: 08/147,773
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 26-JUI
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                                                                                                                                                                                                     227-7400
    12.2%;
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    Score 182;
  BB
  3
Length 309;
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RESULT 3
US-08-280-757B-23
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                                                                                     TELEFAX: (617)
INFORMATION FOR SEQ
                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
08/101.624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                         REFERENCE/DOCKET NUMBER: RP TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/280,757B FILING DATE: 26-JUL-1994
MOLECULE TYPE:
                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                            FILING DATE: 3-NOV-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                  FILING DATE: 26-JULY-199; APPLICATION NUMBER: 08/10 FILING DATE: 19-AUG-1993 APPLICATION NUMBER: 08/10
                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                       NAME: Mandragouras, Amy E. REGISTRATION NUMBER: 36,207
                  TOPOLOGY:
                                                    LENGTH:
                                                                                                                          TELEPHONE:
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Gray, Gary S.
Grey, Gary S.
Greenfield, Edward
NVENTION: NO. 6130316el CTLA4/CD28 Ligands and
NVENTION: Uses Therefor
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l; Mismatches
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                                       Matches
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                                                                                                                                                                                                                              TELEFAX: (617)227-5941 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                NAME: Mandragouras, Amy E. REGISTAN NUMBER: 36,207
REFERENCE/DOCKET NUMBER: BW3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: NO. 6218510e1 FORTITLE OF INVENTION: and Uses Therefor NUMBER OF SEQUENCES: 61
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/205,697A FILING DATE: 02-Mar-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 309 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 6
                                                                                                                                   MOLECULE TYPE: protein
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OPERATING SYSTEM: PC
SOFTWARE: ASCII Text
                                                       Local
                                                                                                                                                      TOPOLOGY:
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7 GLLFLLFSS--LRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESKTVVT 64
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                                                                                                                                                    amino acid
GY: linear
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                                                                                                                                                                                  309 amino acids
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Nadler, Lee M.
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Borriello, Francescopaulo
Freeman, Gordon J.
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                                       Conservative
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                                                     12.2%; Score 182; DB 4
23.6%; Pred. No. 3e-10;
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                                   61;
                                                                                                                                                                                                                                                                                                         BWI-120
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Pred. No. 3e-10;
                                   Mismatches
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                                                                         DB 4; Length 309;
                                     117;
                                   Indels
                                     48;
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RESULT 5
US-08-702-525-21
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 DЬ
                                                                                                                                                   ; MOLECULE TYPE: protein US-08-702-525-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 21, Application US/08702525 Patent No. 6294660
                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                  TELEFAX: (617)227-594
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Nadler, Lee TITLE OF INVENTION: NO. TITLE OF INVENTION: MOI
                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 02-Mar-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: ASCII Text CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 ILQQTLT---ELSVIANFSEPEIKLAQNVTGNSGINLTCTSKQGHPKPKKMYFLITNSTN 178
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                                                                                                                                                                                         LENGTH: 309 amino acids TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                NAME: Mandragouras, Amy E, REGISTRATION NUMBER: 36,207 REFERENCE/DOCKET NUMBER: BW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM:
SOFTWARE: ASCII T
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                             Local Similarity
les 70; Conserv
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                                     GLLFLLFSS--LRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESKTVVT 64
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GLAILIFVTVLLISDAVSVETQAYFNGTAYLPCPFTKAQNISLSELVVFWQ-DQQKLVLY 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02109-1875
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Borriello, Francescopaolo
Freeman, Gordon
                                                                                                                                                                                                                                                                                        (617)227-5941
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                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                            (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
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                                                                         12.2%; Score 182; DB 4; Length 309; 23.6%; Pred. No. 3e-10; rative 61; Mismatches 117; Indels
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Molecules and Uses Therefor
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PCT-US95-02576-21
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Best Local Similarity
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GENERAL INFORMATION:
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NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 02109-10.
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compatible
COMPUTER: IBM PC COMPUTER: OYSTEM: PC-DOS/MS-DOS
,122 ILQQTLT---ELSVIANFSEPEIKLAQNVTGNSGINLTCTSKQGHPKPKKMYFLITNSTN 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY AGENT INFORMATION:
NAME: MANDERS ANY E-
REGISTRATION NUMBER: 36, 207
REFERENCE/DOCKET NUMBER: BW
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 309 amino acid
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OPERATING SYSTEM: PC-D
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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                                             121
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                                                                                                                                                                                         GLLFLLFSS--LRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESKTVVT 64
                                     GFQEVLSVEVTLHVAANFSVPVVS-APHSPSQDELTFTCTSINGYPRP-NVYWI--NKT- 175
                                                                                                            YHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQ----SL 120
                                                                          EHYLGTEKLDSVNAKYLGRTSFD-----RNNWTLRLHNVQIKDMGSYDCFIQKKPPTGSI 121
                                                                                                                                                     GLAILIFVTVLLISDAVSVETQAYFNGTAYLPCPFTKAQNISLSELVVFWQ-DQQKLVLY 66
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                                                                                                                                                                                                                                                                                                                                                                                                                                             : (617)227-7400
(617)227-5941
                                                                                                                                                                                                                                    Conservative
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23.6%; Pred. No. 3e-10;
tive 61; Mismatches 117;
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APPLICANT: Sharpe,
APPLICANT: BOTTIEL
APPLICANT: Freeman
APPLICANT: Nadler,
                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
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Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: BW
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: PC-D
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Borriello, Francescopaulo
APPLICANT: Freeman, Gordon J.
APPLICANT: Nadler, Lee M.
TITLE OF INVENTION: No. 6218510el Forms of T Cell Costimulatory Molecules
TITLE OF INVENTION: and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 02-Mar-1994
ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                        184 EYGDNMQISQD------NVTELFSISNSLSLSFPDGVWHMTVVCVLET----ESMKIS
                                                                                                                        127 ILQQTLT---ELSVIANFSEPEIKLAQNVTGNSGINLTCTSKQGHPKPKKMYFLITNSTN 183
                                                                                                                                                                                                           72
                                                                                                                                                                                                                                                                                            13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
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                                                                                                                                              GFQEVLSVEVTLHVAANFSVPVVS-APHSPSQDELTFTCTSINGYPRP-NVYWI--NKT- 175
SQTGNDIGERDKITENPVSTGEKNAATWSILAVLCLLVVVAVAIGWVCRDRCLQHS
                                                                                                                                                                                                                                             YHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQ----SL 120
                                                                                                                                                                                                                                                                                       GLAILIFVTVLLISDAVSVETQAYFNGTAYLPCPFTKAQNISLSELVVFWQ-DQQKLVLY 71
                                                                              ~--DNSLLDQALQNDTVFLNMRGLYDVVSVLRIARTPSV---NIGCCIENVLLQQNLTVG
                                                                                                                                                                                                       EHYLGTEKLDSVNAKYLGRTSFD-----RNNWTLRLHNVQIKDMGSYDCFIQKKPPTGSI 126
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7: USA
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SYSTEM: PC-DOS/MS-DOS
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23.6%;
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                                                                                                                                                                                                                                                                                                                                                                      Score 182; DB 4;
Pred. No. 3.1e-10;
1; Mismatches 117;
                                                                                                                                                                                                                                                                                                                                                                                                            Length 314;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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APPLICANT: Nadler, Lee
TITLE OF INVENTION: No. 6294660el
TITLE OF INVENTION: Molecules and
TENTION FROM SECURITY SECUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ery Match
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FILING DATE: 02-Mar-1994
ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: BWI-120CPUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: ASCII Text CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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ADDRESSEE: LAHIVE & COCKFIELD
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LENGTH: 314 amino acids
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                                                                        SQTGNDIGERDKITENPVSTGEKNAATWSILAVLCLLVVVAVAIGWVCRDRCLQHS 285
                                                                                                                                                                                                                            ---DNSLLDQALQNDTVFLNMRGLYDVVSVLRIARTPSV---NIGCCIENVLLQQNLTVG 229
                                                                                                                                                                                                                                                                                                            ILQQTLT---ELSVIANFSEPEIKLAQNVTGNSGINLTCTSKQGHPKPKKMYFLITNSTN 183
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SKPLNFTQE----FPSPQTYWKEITASVTVALLLVMLLII-----
                                                                                                                                                    EYGDNMQISQD-----ESMKIS
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Borriello, Francescopaolo
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(617)227-5941
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-VCHKKPNQPS
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RESULT 10
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PCT-US95-02576-13
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Best Local Similarity
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII Text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 314 amino acids
TYPE: amino acid
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ATTORNEY/AGENT INFORMATION:
NAME: MANDIAGEOUTES AMY E
REGISTRATION NUMBER: 36,207
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PRIOR APPLICATION DATA:
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CITY: E
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                                                                              SKPLNETQE----FPSPQTYWKEITASVTVALLLVMLLII-----VCHKKPNQPS 277
                                                                                                                                                           EYGDNMQISQD-----NVTELFSISNSLSLSFPDGVWHMTVVCVLET----ESMKIS
                                                                                                                                                                                             ---DNSLLDQALQNDTVFLNMRGLYDVVSVLRIARTPSV---NIGCCIENVLLQQNLTVG
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(617)227-5941
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Pred. No. 3.1e-10;
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Sequence 1, Application US/08724394A Patent No. 5872237

GENERAL INFORMATION: APPLICANT: Feder,

John N

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Sequence 2, Application PC/TUS9409642
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/724
FILING DATE: 01-OCT-1996
CLASSIFICATION: 536
ATTORNEY_AGENT INFORMATION:
NAME: Fitts, Renee A.
REGISTRATION NUMBER: 35,136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
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TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP
STREET: Two Embarcadero Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Megabase Transcript Map: TITLE OF INVENTION: Sequences and Antibodies NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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                                                                                                                                                               210 IIRDTSTKNVSCYIQNLLI
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                                                                                                                                                                                          204 RIARTPSVNIGCCIENVLLQQNLTVGSQTGNDIGERDKITENPVSTGEKNAATW-----
                                                                                                                                                                                                                                                             144 SAPHSPSQDELTFTCTSINGYPRPNVYWINKTDNSLLDQALQNDTVFLNMRGLYDVVSVL 203
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TYPE: amino acid
STRANDEDNESS: not
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                                                                                                                                                                                                                                                                                                                                84 ALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSLGFQEVLSVEVTLHVAANFSVPVV 143
                                                                                                                                                                                                                                                                                                                                                                     41 ILAVVGEDAELPCRLSPNASAEHLE - - - LRWFRKKVSPAVLVHRDGREQEAEQMPEYRGR
                                                                                                                                                                                                                                                                                                                                                                                                   25 VRAMVGSDVELSC-ACPEGSRFDLNDVYVYWQTSESKTVVTYHIPQNSSLENVDSRYRNR 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Region LOCATION: 1.589 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
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                                                                                                                           -----SILAVLCLLVVVAVAIGW 275
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Tsuchihashi, Zenta
Wolff, Roger K.
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Ruddy, David A.
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Pred. No. 6.2e-09;
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RESULT 12
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Sequence 2, Application Patent No. 5861310 GENERAL INFORMATION:
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Best Local
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APPLICATION NUMBER: US 08
FILING DATE: 13-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Schering-Plough Corporation, M-3-W STREET: One Giralda Farms
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MEDIUM TYPE: Floppy disk
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ATTORNEY/AGENT INFORMATION:
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OPERATING SYSTEM: System Softw
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                                                                                                                                                            TGNDIGERDKITENPVSTGEKNA-----ATWSILAVL-----CLLVVVAVAIGWVCRDR 280
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amino acid
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                                      US/08456104
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21.7%; Pred. No. 1.4e
tive 61; Mismatches
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Word 5.1a
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APPLICANT:

Freeman,

Gordon J.

APPLICANT:

Nadler,

Lee M.

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                                                                                                                 RESULT 13
US-08-101-624-2
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                   Sequence 2, Application US/08101624
Patent No. 5942507
GENERAL INFORMATION:
APPLICANT: Freeman, Gordon J.
APPLICANT: Nadler, Lee M.
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INFORMATION FOR SEQ ID NO:
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LENGTH: 329 amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/109,393;
APPLICATION NUMBER: 19-AUG-1993
ATTORNEY/AGENT INFORMATION:
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   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                     122
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APPLICATION NUMBER: 08/1
FILING DATE: 26-JUL-1993
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                                                                                                                                                                                                                              TGNDIGERDKITENPVSTGEKNA-----ATWSILAVL-----CLLVVVAVAIGWVCRDR 280
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Freeman, Gordon J.
Nadler, Lee M.
Gray, Gary S.
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21.7%; Pred. No. 1.
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TELEFAX: (617) 227-75941

INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 329 amin -----
TYPE:
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                                                                                                                         GENERAL INFORMATION: APPLICANT: Freema
NERAL LARLANT: Freeman, Gordon v.
APPLICANT: Nadler, Lee M.
APPLICANT: Nadler, Lee M.
APPLICANT: Gray, Gary S.
TITLE OF INVENTION: Uses Therefor
TITLE OF INVENTION: Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: RP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                            223 ----DKTRLLSSPFSIELEDPQPPPDHIPW-ITAVLPTVIICVMVFCLILWKWKKKKR
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 MGLSNILFVM-AFLLSGAAPLKIQAYFNETADLPCQFANSQNQSLSELVVFWQDQENLVL 65
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Pred. No. 1.5e-08;
1; Mismatches 121;
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                                                    Sequence 2, Application US/08280757B Patent No. 6130316 GENERAL INFORMATION:
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                APPLICANT: APPLICANT:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
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ADDRESSEE: LAHIVE & COCKFIELD,
STREET: 60 State Street
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APPLICATION NUMBER: 08/1
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SOFTWARE: PatentIn Release #1.0, Version
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/479,744A FILING DATE: June 7, 1995
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Gray, Gary S.
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                  Nadler, Lee
                               Freeman,
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3-NOV-1993
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26-JULY-1993
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                                     Gordon J
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21.7%;
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Pred. No. 1.5e-08;
1; Mismatches 121;
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                 Search completed: October 23,
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INFORMATION FOR SEQ
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FILING DATE: 19-AUG-1993
APPLICATION UMBER: 08/147
FILING DATE: 3-NOV-1993
ATTORNEY/AGENT INFORMATION:
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TITLE OF INVENTION: NO. DISCUSSION TITLE OF INVENTION: Uses Therefor TITLE OF CHORENCES: 53
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APPLICATION NUMBER: US,
FILING DATE: 26-JUL-19
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MEDIUM TYPE: Floppy disk
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PRIOR APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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                                                                                                           232 TGNDIGERDKITENPVSTGEKNA-----ATWSILAVL-----CLLVVVAVAIGWVCRDR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Mandragouras, Amy E. REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
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IntelliGenetics

GENALIGN -Release 5.4

Multiple Sequence Alignment Program

Wed 23 Oct 102 14:25:42-PDT

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US-09-728-18 1 MRLGSPGLLFLLFSSLRADTQEKEVRAMVGSDVELSCACPEGSRFDLNDVYVYWQTSESKT
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VVTYHIPQNSSLENVDSRYRNRALMSPAGMLRGDFSLRLFNVTPQDEQKFHCLVLSQSLGF
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